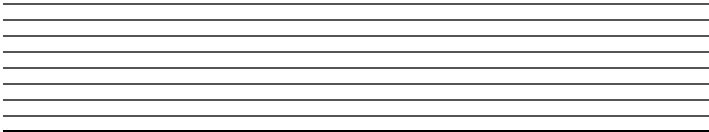
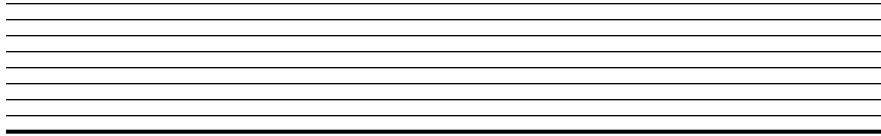


Fiscal Year
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Annual Report



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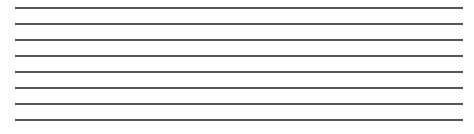
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Fiscal Year

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Annual Report



Lawrence Livermore
National Laboratory
UCAR 10185/94

Preface

The Lawrence Livermore National Laboratory (LLNL), established in September 1952, is a multiprogram Laboratory operated by the University of California (UC) for the U.S. Department of Energy (DOE). Major DOE programs conducted by the Laboratory include weapons research and development, inertial confinement fusion, technology commercialization, nuclear safeguards and security, laser isotope separation, environmental restoration and waste management, magnetic fusion energy, biomedical and environmental research, basic energy sciences, and energy research. The Laboratory also operates the National Energy Research Supercomputer Center (NERSC) for the DOE as well as performing research on a variety of projects for other DOE contractors, other governmental agencies, industry, and nonprofit organizations.

LLNL interacts with universities through their faculties, students, programs, and facilities. Selected faculty members and students are employed year-round, and many work with LLNL scientists and engineers on a volunteer basis.

Significant resources are invested in this Laboratory's highest priority effort to address environmental, safety, and health issues locally for our employees as well as for nearby communities.

FY 1994 Staffing Statistics (Heads)

| | |
|--|------|
| Staff as of September 30, 1994 | 7716 |
| Broken down by highest academic degree | |
| PhD | 1271 |
| Engr | 7 |
| MS | 1169 |
| BS | 1503 |
| AA | 997 |
| No degree | 2769 |
| Broken down by occupational field | |
| Scientists | 1874 |
| Engineers | 1023 |
| Technicians | 2076 |
| Other | 2743 |

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Acronyms and Key Terms

Acronyms

| | | | |
|---------|--|---------|--|
| AD | Associate Director | LGE | Laboratory General Expense |
| AIS | Advanced Isotope Separation | LGF | Liquefied Gaseous Fuels |
| AISD | Administrative Information Systems Department | LLNL | Lawrence Livermore National Laboratory |
| A/S | Assistant Secretary of Energy (DOE) | LTO | Lease To Own |
| ASSIST | Administrative Support System for Information Storage and Transfer | M&O | Maintenance and Operations |
| ATP | Advanced Technology Program | ME | Mechanical Engineering Department |
| AVLIS | Atomic Vapor Laser Isotope Separation | MFD | Materials Fabrication Division |
| | | MFE | Magnetic Fusion Energy |
| | | MPC | Materials Procurement Charge |
| B&R | Budget and Reporting | | |
| BA | Budget Authority | NAI | Nonproliferation, Arms Control, & International Security Directorate |
| BO | Budget Outlay | NASA | National Aeronautics and Space Administration |
| | | NERSC | National Energy Research Supercomputer Center |
| C&M | Construction and Maintenance | NRC | Nuclear Regulatory Commission |
| CPI | Consumer Price Index | NT-ES | Nuclear Test-Experimental Sciences |
| CRO | Communications Resources Office | NTS | Nevada Test Site |
| | | | |
| DCSP | Distributed Computing Support Program | OSD | Office of the Secretary of Defense |
| DNA | Defense Nuclear Agency | | |
| DOE HQ | DOE Headquarters (Wash., DC/Germantown, MD) | PE | Plant Engineering Department |
| DOE OAK | Oakland Operations Office of DOE | PERS | Public Employees Retirement System |
| DOD | Department of Defense | PPI | Producer Price Index |
| DOE | Department of Energy | P&SS | Physics and Space Sciences |
| DP | Defense Programs | | |
| DPRF | Defense Programs Research Facility | R&D | Research and Development |
| DRI | Data Resources, Inc. | RD&T | Research, Development, and Testing |
| DWTF | Decontamination and Waste Treatment Facility | RIA | Resource Information and Analysis Office |
| | | | |
| EE | Electrical Engineering Department | S&S | Safeguards and Security |
| ERIP | Early Retirement Incentive Program | SDIO | Strategic Defense Initiative Organization |
| ERWM | Environmental Restoration and Waste Management | SIC | Stores Issues Charge |
| ES&H | Environment, Safety, and Health | SIS | Special Isotope Separation |
| | | SPD | Special Projects Division |
| FBS | Field Budget Submission | | |
| FIS | Financial Information System | TID | Technical Information Department |
| FMTF | Financial Management Training Program | TT | Tiger Team |
| FTE | Full-Time Equivalent | | |
| FY | Fiscal Year (Oct. 1 through Sept. 30) | U-AVLIS | Uranium Atomic Vapor Laser Isotope Separation |
| | | UC | University of California |
| G&A | General and Administrative | UCRP | University of California Retirement Program |
| GPP | General Plant Projects | USEC | United States Enrichment Corporation |
| | | | |
| ICF | Inertial Confinement Fusion | VRIP | Voluntary Retirement Incentive Program |
| ISC | Institutional Support Charge | VSP | Voluntary Separation Program |
| ISLIS | Institutional Supplemental Labor Information System | | |
| | | | |
| LCC | Livermore Computer Center | WFOE | Work for Other DOE (not directly funded) |
| LDRD | Laboratory Directed Research and Development | WPI | Wage Price Index |

Key Terms

Throughout this document, the term **program** refers to a collection of cost accounts, and the term **organization** refers to a collection of payroll accounts.

1
**Budget
Officer's
Statement**

1

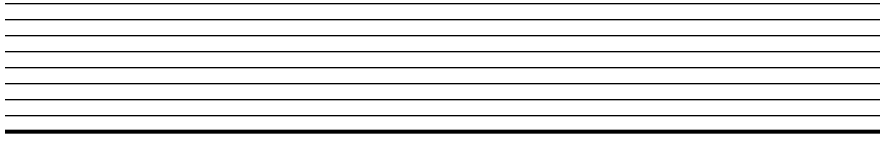
Budget Officer's Statement

The Budget Office FY 1994 Annual Report is intended to provide Laboratory management as well as the resource management community with a single reference source for major Lawrence Livermore National Laboratory FY 1994 budget and workforce data.

The information in this report was compiled by the Budget Office in coordination with the Administrative Information Systems Department, Finance Department, Resource Information and Analysis Office, and members of the Laboratory's resource management community.

Please direct any questions or comments regarding this report to me or members of the Budget Office staff. Suggestions for improving this report as well as other ideas that will help us to enhance our support of the Laboratory's financial management activities are welcomed.

Phillip A. Schultz



2

Budget Office Purpose and Organization

Budget Office Purpose and Organization

The mission of the Budget Office is to provide professional quality resource information and services in support of the:

- Controller's mission of providing the Laboratory with professional financial management.
- Decision process of Laboratory management.
- Promotion of good business practices at the Laboratory.

The Budget Office is part of the Laboratory's administrative support organization. It functions under the direct supervision of the Controller (see Figure 2-1), who reports to the Laboratory Director through the Laboratory Executive Officer on all institutional fiscal matters.

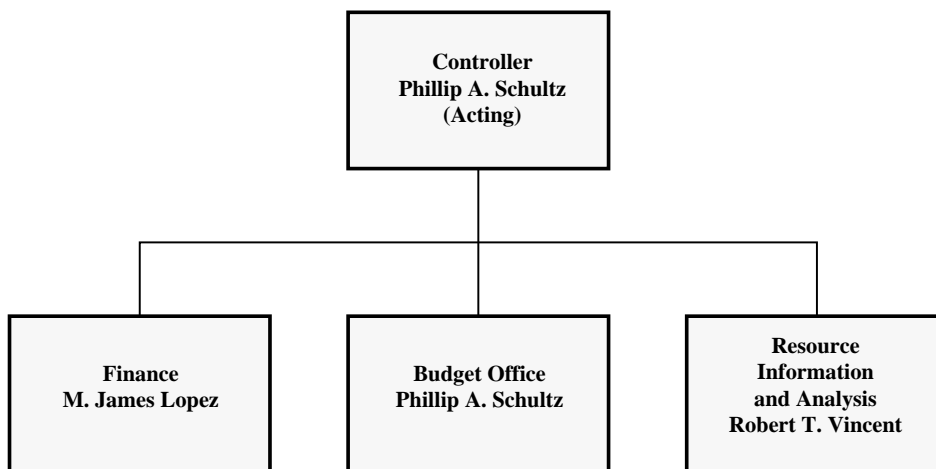


Figure 2-1. General organization of Controller's Office.

The objectives of the Budget Office are to provide a productive work environment for its personnel, to deliver professional products to its customers, to implement DOE and Laboratory policy and guidelines, and to support the Laboratory by providing timely, quality information to its customers. Figure 2-2 shows the organization and staffing of the Budget Office. Special projects such as policy development and feasibility studies are accomplished by organizing ad hoc teams of Budget Office staff members with the required expertise. The Budget Office interfaces daily with staff members from the Resource Information and Analysis (RIA) Office, the Finance Department, the Administrative Information Systems Department (AISD), and the DOE Oakland Operations Office (DOE OAK) as well as with LLNL program/project resource managers and senior Laboratory management.

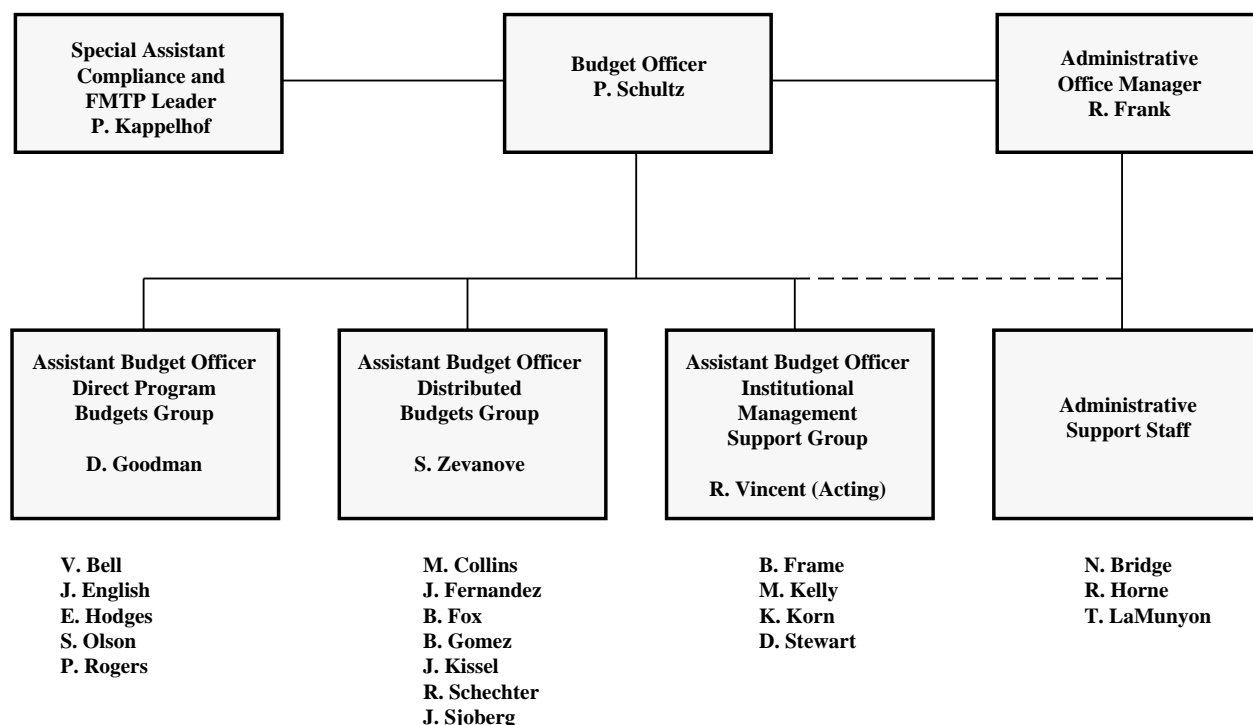


Figure 2-2. Organization of the Budget Office as of September 30, 1994.

Functions

General

The Budget Office performs the following general functions in support of the Laboratory's resource management activities: analyze budget status and trends from an institutional perspective; provide budget-related information, analyses, and support to Laboratory management; manage the Laboratory's process for developing and executing indirect budgets; furnish budget-management support and training to Laboratory programs and departments; and comply with DOE and other funding agencies' requirements for budget information.

The Financial Management Training Program (FMTP) was established in FY 1994 under the Budget Office to enhance training for all personnel with financial management responsibilities. In its first year, the FMTP developed six new classes and had a total of 771 students participate. The FY 1994 classes were on subjects such as "The Federal Budget Process and DOE Funding" and "Cost Estimating Workshop." This LLNL training program has been viewed very favorably by audit and review teams and has been shared with the DOE Oakland Operations Office and other DOE contractors. The FMTP continues to develop new courses on subjects such as "Construction Funding and Accounting" and "Unallowable Costs." The training needs analysis done in FY 1993 identified a total of 20 courses. The FMTP will develop them over several years.

Examples of specific major annual Budget Office responsibilities are the Laboratory budget submissions and the year-end closing activities.

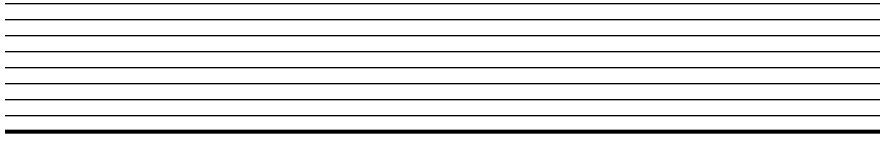
Laboratory Budget Submissions

The Laboratory's major funding requests were submitted to DOE through the annual Field Budget Submission (FBS) process, of which the Defense Programs' budget submission is a separate part. Because of their potential influence on future funding, high priority is assigned to the quality of these budget submissions. The Budget Office coordinated all aspects of the Field Budget and worked closely with the Weapons Program to produce the Defense Programs Budget. Following review, the 22 volumes of the Field Budget and the 3 volumes of the Defense Budget were submitted on time to the DOE OAK and Headquarters–DOE Offices (DOE HQ).

The DOE Budget Validation Review team appraised the LLNL FY 1996 budget formulation process and found no major problems. The reviewers noted the Laboratory's commitment to improving the DOE budget process. The LLNL Budget Office presented ideas and proposals to DOE to improve the quality and usefulness of budget estimates. The Laboratory's effort includes discussions with DOE HQ, written comments and proposals, solicitation of comments from other DOE Laboratories, representation on DOE's Budget Formulation Subcommittee of the Budget Stakeholders Group, active participation in the budget process workshop at the DOE Controller's Conference, and an open offer of assistance in the on-going process.

Year-End Closing Activities

The purpose of the Laboratory's closing process is to ensure that annual direct and indirect costs have been appropriately accounted for and assigned. The FY 1994 closing process was a joint effort of the AISD, Budget Office, Finance Department, and the RIA, in conjunction with the program/project resource analysts. The closing was concluded successfully, with the year-end Financial Information System (FIS) data transmitted by Finance to DOE on schedule. Postmortem discussions with representatives of the Laboratory's resource management community following the FY 1994 closing process provided suggestions which, when implemented in the FY 1995 closing process, will continue to improve the efficiency and effectiveness of the year-end closing procedures.



3

Direct Program Budgets

Direct Program Budgets

During the past fiscal year, the emerging international and domestic challenges and opportunities facing our nation continued to manifest themselves in the changing mix and priorities of programs activities at the Laboratory. For much of the Laboratory's long and successful history, its primary emphasis has been to promote and ensure our national security through multidisciplinary funded weapons research. With a broader definition of national security that now encompasses economic, scientific, technological, and environmental dimensions, the Laboratory vigorously pursued an increasingly diverse mix of programs that were reflective of this broader definition of national security.

Compared with FY 1993, the Laboratory's total operating funded program costs in FY 1994 declined by approximately 9.9%. Major Laboratory programs experiencing significant funding decreases in FY 1994 compared with FY 1993 were: Weapons RD&T; Inertial Confinement Fusion; Advanced Technology; and U-AVLIS. These funding decreases were consistent with commensurate overall funding decreases experienced by the Department of Energy's Defense Programs and the Department of Defense's RD&T programs. Conversely, our Technology Transfer and Nonproliferation and Intelligence programs experienced significant growth in FY 1994, which was consistent with the Laboratory's changing mission and the priorities of the federal government. The remainder of the Laboratory's major operating expense funded programs in FY 1994, including Work-for-Other DOE and non-DOE agencies, either remained relatively constant or increased/decreased slightly when compared with FY 1993.

Overall capital equipment items and General Plant Projects costs in FY 1994 remained relatively constant when compared with FY 1993. Costs for the Laboratory's line item projects mainly represented completion related costs, with only one new start in FY 1994, the B-Factory, which the Laboratory is supporting Stanford University in constructing.

During the past fiscal year, the Laboratory had a number of major programmatic accomplishments that resulted from funding provided by its diverse customer base within the federal government and the private sector. They were the following:

- **Human Genome Project** - The Laboratory continued to develop technologies that advanced the understanding of genes involved in DNA repair, replication and recombination, as well as the roles they may play in susceptibility to disease. Our research in human chromosome 19 resulted in the identification of the gene associated with myotonic dystrophy, a common form of muscular dystrophy.
- **Atomic Vapor Laser Isotope Separation (AVLIS)** - Because of the successful development and large-scale demonstration of the AVLIS process, this program is in the process of being transitioned to the United States Enrichment Corporation for deployment.

- **Clementine Satellite and Sensors** - The Clementine satellite was launched from Vandenberg Air Force Base in January 1994. Clementine mapped the entire surface of the Moon at resolutions never before attained and also assembled a map of its lunar topography to a resolution of 40 m.
- **Series of World's Most Powerful Lasers** - Over the last two decades, the Laboratory has built and operated a series of laser systems, each five to ten times more powerful than its predecessor. Each system was a tool to expand our scientific understanding, and each has taken us a step closer to achieving the fusion process. Laboratory researchers have used Nova, the latest of our lasers, to access physics regimes of interest in nuclear weapons design and obtain data for comparison with advanced numerical simulations. The goal of the National Ignition Facility, whose conceptual design was completed by the Laboratory in FY 1994, is to achieve thermonuclear ignition and fusion burn and to produce net energy gain.
- **Stockpile Stewardship/Nonproliferation** - The Laboratory is currently upgrading existing non-nuclear experimental facilities and designing new facilities to compensate, to the extent possible, for the absence of nuclear testing. In addition, many LLNL nuclear technologies are finding increasing application in non-nuclear projects, such as highly intelligent weapons, high-technology countermeasures, and various civilian applications. Our efforts in nonproliferation focus on developing technologies to stem or counter nuclear proliferation.
- **Computing the Nature of Science** - The Laboratory, along with other DOE national laboratories, continues to push the edge of computing capability using networking, distributed computing, and massively parallel processing. Due to a number of the Laboratory's innovations in this dynamic field, we continue to save American companies millions of dollars annually by avoiding costly product development tests, improving their product designs, and shortening their time to market new products.

Table 3-1. Laboratory cost trends by funding source, FY 1990–1994 (\$M).

| Program | FY90 Costs | FY91 Costs | FY92 Costs | FY93 Costs | FY94 Costs |
|---|---------------|---------------|---------------|---------------|---------------|
| A/S Defense | 487.8 | 435.2 | 383.0 | 385.2 | 349.7 |
| A/S Environmental Restoration & Waste Mgmt. | 0.0 | 46.5 | 68.2 | 78.7 | 70.7 |
| A/S Environment, Safety, & Health | 3.0 | 3.1 | 7.7 | 9.6 | 9.8 |
| A/S Fossil Energy | 5.2 | 6.1 | 5.7 | 5.3 | 2.5 |
| A/S Administration & Human Resource Mgmt. | 0.1 | 0.7 | 0.8 | 1.0 | 1.1 |
| A/S Energy Efficiency & Renewable Energy | 0.9 | 1.2 | 2.4 | 0.8 | 1.5 |
| A/S Policy, Planning, & Program Evaluation | 0.0 | 0.3 | 0.3 | 0.5 | 0.2 |
| Office of Energy Research | 78.8 | 91.4 | 87.7 | 84.4 | 82.0 |
| Office of Nuclear Energy | 102.7 | 121.8 | 135.2 | 83.5 | 9.9 |
| Office of Intelligence & Natl. Security | 0.1 | 8.4 | 34.5 | 53.6 | 73.6 |
| Office of Civilian Radioactive Waste Mgmt. | 17.3 | 14.2 | 9.8 | 12.1 | 15.4 |
| Office of New Production Reactors | 3.2 | 0.0 | 0.6 | 0.1 | 0.0 |
| Office of Science, Education, & Technical Information | 0.0 | 0.0 | 0.0 | 0.0 | 1.0 |
| Other Doe Organizations (WFDOE) | 44.6 | 50.8 | 54.8 | 61.6 | 75.6 |
| Non-DOE | 240.0 | 273.0 | 231.9 | 175.4 | 164.8 |
| Construction/Equipment | 86.8 | 82.7 | 70.2 | 97.2 | 107.2 |
| Total | 1070.5 | 1135.4 | 1092.8 | 1049.0 | 965.2 |

Table 3-2. Laboratory funding by source, FY 1994–1996 (\$M).

| Total Laboratory Funding | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|-----------------------|-----------------------|---|---|---|
| DOE Direct | | | | | | |
| A/S Defense Programs (DP) | 50.0 | 353.6 | 349.7 | 53.9 | 341.6 | 351.9 |
| A/S Environmental Restoration & Waste Mgmt. | 13.0 | 67.0 | 70.7 | 9.2 | 85.0 | 81.4 |
| A/S Environment, Safety, & Health | 0.8 | 10.5 | 9.8 | 1.5 | 15.5 | 17.2 |
| A/S Fossil Energy | 0.9 | 3.0 | 2.5 | 1.4 | 1.9 | 1.0 |
| A/S Administration & Human Resource Mgmt. | 0.8 | 1.3 | 1.1 | 1.0 | 1.1 | 1.4 |
| A/S Energy Efficiency & Renewable Energy | 0.0 | 1.8 | 1.5 | 0.6 | 5.6 | 5.8 |
| A/S Policy, Planning, & Program Evaluation | 0.0 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 |
| Office of Energy Research | 9.2 | 85.6 | 82.0 | 12.9 | 99.8 | 96.5 |
| Office of Nuclear Energy | 8.9 | 9.9 | 9.9 | 8.9 | 36.5 | 26.6 |
| Office of Intelligence & Natl. Security | 13.7 | 68.2 | 73.6 | 8.2 | 81.3 | 82.6 |
| Office of Civilian Radioactive Waste Mgmt. | 1.5 | 14.9 | 15.4 | 1.0 | 16.2 | 17.8 |
| Office of Science, Education, & Technical Information | 0.1 | 1.1 | 1.0 | 0.1 | 2.4 | 2.8 |
| <i>Subtotal, DOE Direct Operating Funds</i> | 98.9 | 617.1 | 617.6 | 98.7 | 687.1 | 685.2 |
| Other DOE Organizations (WFDOE) | | | | | | |
| Nevada Operations Office | 0.5 | 8.7 | 8.8 | 0.4 | N/A | N/A |
| Albuquerque Operations Office | 12.1 | 17.3 | 24.8 | 4.6 | N/A | N/A |
| Oakland Operations Office | 6.1 | 17.1 | 13.6 | 9.6 | N/A | N/A |
| Idaho Operations Office | 0.1 | 0.0 | 0.1 | 0.0 | N/A | N/A |
| DOE Integrated Contractors | 0.0 | 35.1 | 28.3 | 6.8 | N/A | N/A |
| <i>Subtotal, WFDOE</i> | 18.8 | 78.2 | 75.6 | 21.4 | 93.3 | 93.3 |
| Non-DOE (Reimbursable) | | | | | | |
| Department of Defense | 45.0 | 76.6 | 103.1 | 18.5 | 79.4 | 53.3 |
| United States Enrichment Corporation (USEC) | 0.0 | 40.8 | 38.5 | 2.3 | 37.2 | 45.3 |
| National Aeronautics & Space Administration (NASA) | 1.3 | 4.6 | 5.1 | 0.8 | 4.0 | 3.5 |
| Nuclear Regulatory Commission (NRC) | 2.9 | 4.2 | 4.8 | 2.3 | 4.5 | 3.4 |
| Other Federal Agencies | 9.3 | 11.7 | 3.3 | 17.7 | 14.9 | 13.2 |
| Non-federal Entities | 0.0 | 15.3 | 10.0 | 5.3 | 28.2 | 24.8 |
| <i>Subtotal, Non-DOE</i> | 58.5 | 153.2 | 164.8 | 46.9 | 168.2 | 143.5 |
| Total Laboratory Operating Funds | 176.2 | 848.5 | 858.0 | 167.0 | 948.6 | 922.0 |
| DOE Capital | | | | | | |
| Equipment | 45.8 | 37.6 | 46.8 | 36.6 | 36.0 | 40.9 |
| General Plant | 20.0 | -0.3 | 8.7 | 11.0 | 7.9 | 5.6 |
| Line Item Construction | 118.5 | 40.8 | 51.7 | 107.6 | 72.4 | 83.2 |
| Total DOE Capital Funds | 184.3 | 78.1 | 107.2 | 155.2 | 116.3 | 129.7 |
| Total Laboratory Funding | 360.5 | 926.6 | 965.2 | 322.2 | 1064.9 | 1051.7 |

Table 3-3. Defense programs funding by appropriation and budget and reporting (B&R) categories (\$M).

| Defense Programs | | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|----------------------------------|--|---------------|---------------|---|---|---|
| Appropriation: Weapons Activities (TC) | | | | | | | |
| GB0103 | Core Research & Development | 17.6 | 163.6 | 168.9 | 12.2 | 147.7 | 174.4 |
| GB0104 | Core Testing | 2.8 | 41.7 | 42.7 | 1.7 | 34.3 | 12.8 |
| GB010601 | R&D Cooperative Agreements | 23.1 | 46.2 | 43.6 | 25.7 | 65.7 | 68.0 |
| GB010602 | Education Cooperative Agreements | 0.1 | 1.7 | 1.4 | 0.4 | 1.3 | 1.0 |
| GB010701 | Stabilization | 0.0 | 4.6 | 0.2 | 4.4 | 0.0 | 0.0 |
| GB02 | Inertial Confinement Fusion | 4.6 | 77.3 | 77.6 | 4.3 | 79.3 | 81.6 |
| GB03 | Stockpile Support | 0.0 | 0.7 | 0.4 | 0.3 | 2.0 | 2.0 |
| GB05 | Program Direction | 1.3 | 6.8 | 6.5 | 1.6 | 6.3 | 6.8 |
| GB06 | Weapons Complex Reconfiguration | 0.2 | 8.2 | 6.4 | 2.0 | 0.3 | 0.0 |
| Appropriation: Materials Production & Other Defense (TF) | | | | | | | |
| GE03 | Supporting Services | 0.2 | 3.0 | 2.0 | 1.1 | 4.7 | 5.3 |
| Total Defense Programs | | 50.0 | 353.6 | 349.7 | 53.9 | 341.6 | 351.9 |

Table 3-4. Environmental restoration and waste management funding by appropriation and B&R categories (\$M).

| Environmental Restoration & Waste Management | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|--|--|---------------|---------------|---|---|---|
| Appropriation: Defense Environment Restoration & Waste Mgmt. (TE) | | | | | | |
| EW11 Corrective Activities (Defense) | 0.3 | 0.2 | 0.2 | 0.3 | 0.0 | 0.0 |
| EW20 Environmental Restoration | 2.8 | 28.6 | 28.8 | 2.6 | 30.7 | 26.6 |
| EW31 Waste Management (Defense) | 6.3 | 29.3 | 30.7 | 4.9 | 40.8 | 40.9 |
| EW40 Technology Development | 3.5 | 8.7 | 10.9 | 1.2 | 13.3 | 13.7 |
| EW60 Program Direction | 0.0 | 0.2 | 0.0 | 0.2 | 0.0 | 0.0 |
| EW70 Facility Transition & Management | 0.0 | 0.1 | 0.1 | 0.0 | 0.2 | 0.2 |
| Total Environmental Restoration & Waste Management | 13.0 | 67.0 | 70.7 | 9.2 | 85.0 | 81.4 |

Table 3-5. Environment, safety, and health (ES&H) funding by appropriation and B&R categories (\$M).

| Environment, Safety, & Health | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|---------------|---------------|---|---|---|
| Appropriation: Energy Supply Research & Development (YA) | | | | | | |
| HA01 Environment, Safety, & Health | 0.7 | 6.1 | 5.6 | 1.3 | 9.5 | 10.3 |
| HP01 Nuclear Safety-Policy Contractor Support | 0.0 | 1.0 | 0.9 | 0.1 | 1.5 | 1.8 |
| Appropriation: Weapons Activities (TC) | | | | | | |
| HR0115 Marshall Island Program | 0.1 | 1.8 | 1.8 | 0.1 | 2.5 | 2.6 |
| Appropriation: Materials Production & Other Defense (TF) | | | | | | |
| HS01 Office of Security Evaluations | 0.0 | 1.4 | 1.3 | 0.0 | 2.0 | 2.5 |
| NS01 Standards Oversight | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| NS06 Secretarial Initiatives | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| Total Environment, Safety, & Health | 0.8 | 10.5 | 9.8 | 1.5 | 15.5 | 17.2 |

Table 3-6. Fossil energy funding by appropriation and B&R categories (\$M).

| | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|---------------|---------------|---|---|---|
| Fossil Energy | | | | | | |
| Appropriation: Fossil Energy Research & Development (JA) | | | | | | |
| Coal: | | | | | | |
| AA15 Advanced Research & Technology Development | 0.0 | 0.3 | 0.3 | 0.0 | 0.5 | 0.5 |
| Gas: | | | | | | |
| AB05 Natural Gas Research | 0.0 | 0.3 | 0.3 | 0.0 | 0.2 | 0.2 |
| Petroleum: | | | | | | |
| AC05 Advanced Extraction & Process Technology | 0.3 | 1.4 | 0.5 | 1.2 | 1.2 | 0.3 |
| AC15 Enhanced Oil Recovery | 0.1 | 1.1 | 1.0 | 0.2 | 0.0 | 0.0 |
| AC20 Oil Shale | 0.4 | 0.0 | 0.4 | 0.0 | 0.0 | 0.0 |
| Total Fossil Energy | 0.9 | 3.0 | 2.5 | 1.4 | 1.9 | 1.0 |

Table 3-7. Administration and human resource management funding by appropriation and B&R categories (\$M).

| | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|---------------|---------------|---|---|---|
| Administration & Human Resource Management | | | | | | |
| Appropriation: Energy Supply Research & Development (YA) | | | | | | |
| WB00 In-House Energy Management | 0.7 | 0.7 | 0.5 | 0.8 | 0.5 | 0.7 |
| Appropriation: Departmental Administration (SA) | | | | | | |
| WM10 Administration & Human Resource Mgmt. | 0.2 | 0.6 | 0.6 | 0.2 | 0.6 | 0.7 |
| Total Administration & Human Resource Management | 0.8 | 1.3 | 1.1 | 1.0 | 1.1 | 1.4 |

Table 3-8. Energy efficiency and renewable energy funding by appropriation and B&R categories (\$M).

| Energy Efficiency & Renewable Energy | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|---------------|---------------|---|---|---|
| Appropriation: Energy Conservation (HA) | | | | | | |
| ED38 Enabling Materials | 0.0 | 0.2 | 0.2 | 0.1 | 0.4 | 0.0 |
| ED39 Improved Combustion Efficiency | 0.0 | 0.2 | 0.2 | 0.0 | 0.3 | 0.3 |
| ED51 Materials Development | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| EE53 Electric & Hybrid Propulsion Development | 0.1 | 0.2 | 0.3 | 0.0 | 1.6 | 1.1 |
| EF72 Invention & Innovation Program | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Appropriation: Energy Supply Research & Development (YA) | | | | | | |
| AK06 Systems & Materials Research | 0.0 | 0.2 | 0.1 | 0.1 | 0.2 | 0.3 |
| AR00 Hydrogen Research | 0.0 | 1.0 | 0.6 | 0.3 | 3.1 | 4.1 |
| Total Energy Efficiency & Renewable Energy | 0.0 | 1.8 | 1.5 | 0.6 | 5.6 | 5.8 |

Table 3-9. Policy, planning, and program evaluation funding by appropriation and B&R categories (\$M).

| Policy, Planning, & Program Evaluation | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|---------------|---------------|---|---|---|
| Appropriation: Energy Supply Research & Development (YA) | | | | | | |
| PE04 Office of Environmental Analysis | 0.0 | 0.2 | 0.1 | 0.0 | 0.1 | 0.1 |
| Total Policy, Planning, & Program Evaluation | 0.0 | 0.2 | 0.2 | 0.0 | 0.2 | 0.2 |

Table 3-10. Energy research funding by appropriation and B&R categories (\$M).

| | | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|--|---|--|-----------------------|-----------------------|---|---|---|
| Energy Research | | | | | | | |
| Appropriation: Energy Supply Research & Development (YA) | | | | | | | |
| AT05 | Applied Plasma Physics | 1.1 | 12.7 | 13.4 | 0.5 | 12.8 | 1.9 |
| AT10 | Confinement Systems | 0.3 | 4.5 | 4.6 | 0.1 | 4.2 | 0.0 |
| AT15 | Development & Technology | 1.8 | 7.7 | 7.2 | 2.3 | 10.2 | 11.0 |
| AT25 | Inertial Fusion Energy | 0.1 | 0.8 | 0.8 | 0.1 | 1.3 | 1.8 |
| KC02 | Materials Sciences | 0.3 | 2.4 | 2.1 | 0.6 | 2.1 | 3.0 |
| KC03 | Chemical Sciences | 0.1 | 0.3 | 0.2 | 0.2 | 0.0 | 0.0 |
| KC04 | Engineering & Geosciences | 0.0 | 1.7 | 1.6 | 0.1 | 2.2 | 2.6 |
| KC05 | Advanced Energy Projects | 0.1 | 1.3 | 1.0 | 0.4 | 1.0 | 0.4 |
| KC07 | High Performance Computing & Communications | 4.8 | 32.4 | 29.5 | 7.7 | 42.4 | 50.3 |
| KP01 | Analytical Technology | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 |
| KP02 | Environmental Research | 0.0 | 1.2 | 1.2 | 0.1 | 0.9 | 1.0 |
| KP03 | Health Effects | 0.0 | 0.9 | 0.9 | 0.0 | 1.0 | 1.0 |
| KP04 | General Life Sciences | 0.5 | 11.5 | 11.4 | 0.6 | 11.6 | 12.5 |
| KP05 | Carbon Dioxide Research | 0.0 | 6.1 | 5.9 | 0.2 | 6.3 | 6.8 |
| Appropriation: General Science & Research Activities (WA) | | | | | | | |
| KA03 | High Energy Technology | 0.0 | 1.1 | 1.1 | 0.0 | 2.0 | 2.0 |
| KB02 | Heavy Ion Physics | 0.0 | 0.3 | 0.2 | 0.0 | 0.3 | 0.4 |
| KB03 | Nuclear Theory | 0.0 | 0.1 | 0.1 | 0.0 | 0.1 | 0.1 |
| KB04 | Nuclear Data Compilation & Evaluation | 0.0 | 0.4 | 0.4 | 0.0 | 1.3 | 1.6 |
| Total Energy Research | | 9.2 | 85.6 | 82.0 | 12.9 | 99.8 | 96.5 |

Table 3-11. Nuclear energy funding by appropriation and B&R categories (\$M).

| Nuclear Energy | | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|--|---------------|---------------|---|---|---|
| Appropriation: Energy Supply Research & Development (YA) | | | | | | | |
| AF20 | Advanced Reactor R&D | 0.1 | 0.1 | 0.1 | 0.1 | 0.0 | 0.0 |
| KK05 | Policy & Management-NE | 0.2 | 0.2 | 0.2 | 0.1 | 0.0 | 0.0 |
| Appropriation: Materials Production & Other Defense (TF) | | | | | | | |
| AF1210 | Light Water Reactors | 1.1 | 0.0 | 1.0 | 0.1 | 1.2 | 1.3 |
| AJ05 | Naval Reactors Development | 0.0 | 0.3 | 0.3 | 0.0 | 0.3 | 0.3 |
| Appropriation: Uranium Supply & Enrichment Activity (XA) | | | | | | | |
| CD1004 | Gaseous Diffusion Operations & Support | 0.0 | 0.1 | 0.1 | 0.0 | 0.0 | 0.0 |
| CD1007 | Maintenance of Facilities | 0.4 | 0.0 | 0.2 | 0.2 | 0.0 | 0.0 |
| CD1008 | U-AVLIS | 6.9 | -0.3 | 3.9 | 2.8 | 26.0 | 15.0 |
| CD1009 | Technology Transfer | 0.0 | 0.6 | 0.3 | 0.2 | 0.0 | 0.0 |
| CD1012 | Program Management Services | 0.2 | 3.5 | 3.0 | 0.7 | 2.0 | 2.0 |
| CD1013 | Transparency Measures | 0.0 | 1.7 | 0.8 | 0.9 | 7.0 | 8.0 |
| CD1015 | Management Strategy Development | 0.0 | 3.8 | 0.0 | 3.7 | 0.0 | 0.0 |
| Total Nuclear Energy | | 8.9 | 9.9 | 9.9 | 8.9 | 36.5 | 26.6 |

Table 3-12. Intelligence and national security funding by appropriation and B&R categories (\$M).

| Intelligence & National Security | | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|--|---------------|---------------|---|---|---|
| Appropriation: Materials Production & Other Defense (TF) | | | | | | | |
| GC01 | Arms Control | 11.0 | 43.4 | 50.1 | 4.3 | 47.9 | 50.0 |
| GJ01 | Export Control/Nonproliferation Resource | 0.1 | 1.5 | 1.4 | 0.2 | 2.4 | 2.8 |
| GJ04 | Intl. Safeguards & Physical Security | 0.6 | 6.6 | 6.6 | 0.6 | 11.1 | 12.4 |
| GJ06 | Nuclear Nonproliferation Policy | 0.0 | 1.5 | 1.3 | 0.2 | 1.6 | 1.9 |
| Appropriation: Emergency Preparedness (EA) | | | | | | | |
| NB04 | Emergency Operations Contractual Activity | 0.1 | 0.2 | 0.3 | 0.0 | 0.0 | 0.0 |
| Intelligence | | | | | | | |
| Appropriation: Materials Production & Other Defense (TF) | | | | | | | |
| NT01 | Analytical Support | 0.8 | 6.8 | 6.5 | 1.1 | 6.3 | 7.0 |
| NT03 | Counterintelligence | 0.1 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| NT04 | Technical Support | 0.3 | 0.4 | 0.4 | 0.2 | 0.2 | 0.2 |
| Security Affairs | | | | | | | |
| Appropriation: Materials Production & Other Defense (TF) | | | | | | | |
| GD03 | Classification Resources | 0.0 | 0.8 | 0.0 | 0.8 | 0.0 | 0.0 |
| GD05 | Operational Support Activities | 0.3 | 0.0 | 0.0 | 0.3 | 0.2 | 0.2 |
| GD06 | Technology & Systems Development | 0.4 | 4.0 | 3.8 | 0.6 | 7.0 | 4.9 |
| GH03 | Related Security Investigations Activities | 0.0 | 3.2 | 3.2 | 0.0 | 4.6 | 3.2 |
| Total Intelligence & National Security | | 13.7 | 68.2 | 73.6 | 8.2 | 81.3 | 82.6 |

Table 3-13. Civilian radioactive waste management funding by appropriation and B&R categories (\$M).

| Civilian Radioactive Waste Management | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|---------------|---------------|---|---|---|
| Appropriation: Nuclear Waste Fund (WD) | | | | | | |
| DB01 First Repository | 1.1 | 3.3 | 4.1 | 0.3 | 15.0 | 17.0 |
| DB09 Program Support | 0.4 | 1.4 | 1.6 | 0.3 | 1.2 | 0.8 |
| Appropriation: Defense Nuclear Waste Fund (TH) | | | | | | |
| DB01 First Repository | 0.0 | 10.2 | 9.8 | 0.5 | 0.0 | 0.0 |
| Total Civilian Radioactive Waste Management | 1.5 | 14.9 | 15.4 | 1.0 | 16.2 | 17.8 |

Table 3-14. Science education and technical information funding by appropriation and B&R categories (\$M).

| Science Education & Technical Information | FY94 Beginning Uncosted Obligations | FY94 Funds | FY94 Costs | FY94 Ending Uncosted Obligations | FY96 FBS BA FY95 Guidance Case | FY96 FBS BA FY96 Guidance Case |
|---|--|---------------|---------------|---|---|---|
| Appropriation: Energy Supply Research & Development (YA) | | | | | | |
| KT01 Laboratory Cooperative Science Education Center | 0.0 | 1.1 | 1.0 | 0.1 | 2.2 | 2.6 |
| Appropriation: Materials Production & Other Defense (TF) | | | | | | |
| KV01 Laboratory Cooperative Science Education Center | 0.1 | 0.0 | 0.0 | 0.0 | 0.2 | 0.2 |
| Total Science Education & Technical Information | 0.1 | 1.1 | 1.0 | 0.1 | 2.4 | 2.8 |

Table 3-15. Reimbursables for other federal agencies (\$M).

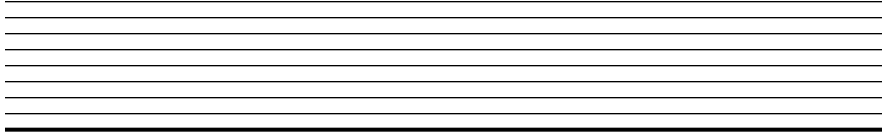
| Reimbursables for Other Federal Agencies | FY94 Costs | FBS FY96 BO FY95 Guidance | FBS FY96 BO FY96 Guidance |
|--|-----------------------|--|--|
| Department of Defense (DOD) | | | |
| Advanced Technology Program (ATP) | 34.2 | 15.9 | 13.3 |
| Advanced Conventional Weapons System | 6.0 | 1.6 | 1.1 |
| Other Air Force | 10.3 | 5.6 | 5.3 |
| Other Army | 6.2 | 3.2 | 2.7 |
| Other Navy | 5.7 | 2.4 | 1.6 |
| Other Defense Nuclear Agency (DNA) | 5.4 | 4.0 | 4.3 |
| Other Strategic Defense Initiative Organization (SDIO) | 6.1 | 23.8 | 1.0 |
| Other Office of the Secretary of Defense (OSD) | 8.2 | 11.0 | 11.7 |
| Other DOD | 21.0 | 11.9 | 12.3 |
| <i>Subtotal, Department of Defense</i> | 103.1 | 79.4 | 53.3 |
| USEC | 38.5 | 37.2 | 45.3 |
| NASA | 5.1 | 4.0 | 3.5 |
| NRC | 4.8 | 4.5 | 3.4 |
| Other Federal Agencies | 3.3 | 14.9 | 13.2 |
| Total Reimbursables for Other Federal Agencies | 154.8 | 140.0 | 118.7 |

Table 3-16. Capital equipment costs in FY 1994 by DOE B&R categories (\$M).

| DOE Capital Equipment B&R Categories | FY94 Costs |
|--|---------------|
| AT - Magnetic fusion | 0.1 |
| AT - NERSC | 1.2 |
| CD - Uranium enrichment | 0.1 |
| DB - Nuclear waste | 0.3 |
| EW - ERWM | 6.1 |
| GB01 - Weapons | 28.0 |
| GB02 - Inertial confinement fusion | 3.5 |
| GC - Verification & control technology | 4.5 |
| GD - National security | 0.4 |
| HR - ES&H | 0.3 |
| KC - NERSC | 0.4 |
| KC - Basic energy sciences | 0.8 |
| KP - Biological & environmental research | 0.9 |
| Other | 0.2 |
| Total | 46.8 |

Table 3-17. Line item construction projects (\$M).

| Line Item Construction | Funding Through FY94 | Total Estimated Cost | FY Completion Date |
|---|-------------------------------------|-------------------------------------|-----------------------------------|
| Atmospheric Emergency Response Facility | 11.3 | 11.3 | FY96 |
| Infrastructure Modernization | 11.1 | 13.8 | FY97 |
| Nuclear Test Technology Complex | 64.7 | 64.7 | FY95 |
| Site 300 Facilities Revitalization | 21.2 | 27.4 | FY97 |
| Electrical Power System Upgrade | 28.2 | 31.0 | FY95 |
| Decontamination & Waste Treatment Facility (DWTF) | 19.8 | 74.0 | FY99 |
| Defense Programs Research Facility (DPRF) | 67.1 | 72.6 | FY96 |
| Sanitary Sewer Sytem Upgrades | 7.1 | 7.1 | FY95 |
| Tank Upgrades Project | 11.6 | 18.5 | FY96 |
| LLNL/Western Tie Line (Reimbursable) | 8.4 | 8.4 | FY96 |
| Fiber Optics Communications Backbone System | 1.1 | 4.6 | FY97 |
| B Factory | 2.5 | 2.5 | FY97 |
| Environmental, Safety, & Health Improvements | 5.4 | 5.4 | FY95 |



4

Distributed Budgets

Distributed Budgets

The Distributed Budget areas include Overhead, Support and Organization Burdens, Distributed Service Centers, Laboratory Directed Research and Development (LDRD), and Institutional Support Charges (ISC). Limited information on LDRD and ISC is provided below, and more detailed information on Overhead, Support and Organization Burdens, and Distributed Service Centers follows.

Laboratory Directed Research and Development (LDRD)

The LDRD Program at LLNL funds projects that enhance the scientific and technological vitality of the Laboratory. FY 1994 costs for all LDRD activities were \$50.3 million, supporting an average of 206.7 Full-Time Equivalents (FTEs).

Institutional Support Charges (ISC)

The Laboratory collects two separate ISCs, ISC-1 and ISC-2, to cover related institutional costs incurred when performing non-DOE-funded work. ISC-1 covers the non-DOE share of LLNL general purpose equipment, and ISC-2 covers the non-DOE share of hazardous waste management activities. Both ISC-1 and ISC-2 are based on a percentage of the related non-DOE-funded wage expense. In FY 1994, ISC-1 and ISC-2 were 3.0%, and each collected \$1.5 million.

Distributed Costs

This section presents Overhead, Support and Organization Burdens, and Distributed Service Center data related to total Laboratory operating costs.

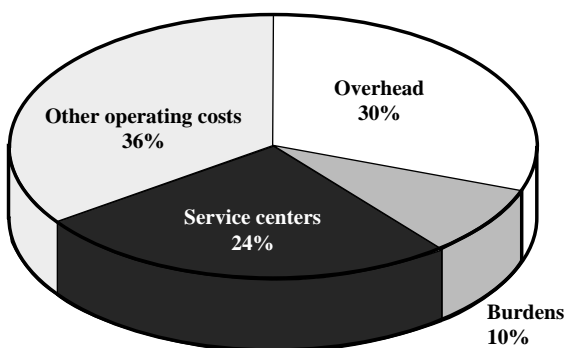
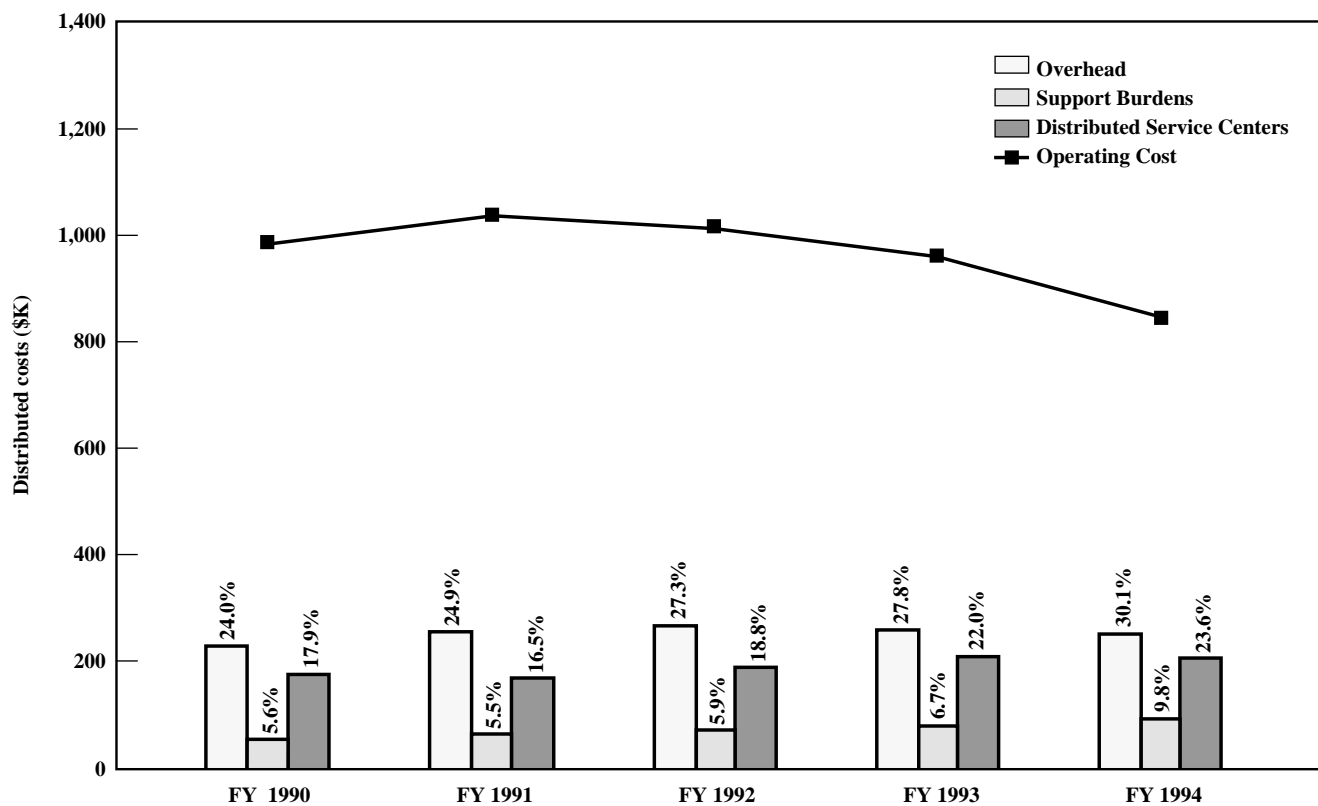


Figure 4-1. Distributed budget activities as a percentage of total operating costs in FY 1994.

Caveat: The distributed categories above overlap. For example, Overhead was charged to Burdens and Service centers.

Table 4-1. Distributed costs, FY 1990–1994 (\$K).

| Costs | FY 1990 | FY 1991 | FY 1992 | FY 1993 | FY 1994 |
|-----------------------------|---------|---------|---------|---------|---------|
| Overhead | 236 | 262 | 279 | 264 | 259 |
| Support Burdens | 55 | 58 | 60 | 63 | 84 |
| Distributed Service Centers | 176 | 174 | 193 | 209 | 203 |
| Operating Cost | 984 | 1,053 | 1,023 | 952 | 858 |

**Figure 4-2. Distributed cost trends compared to total LLNL operating cost trends, FY 1990–1994.**

NOTE: Overhead costs for FY 1994 are inflated by about \$7M (or about 0.8% of operating costs) due to the inclusion of General Overhead on Support/Organization Burdens and Distributed Services that were charged to overhead cost accounts.

Overhead

Overhead includes General Overhead and General & Administrative (G&A) Overhead. Overhead costs in FY 1994 accounted for 30.1% of the Laboratory's total operating costs. FY 1994 overhead costs totaled \$258.5 million, supporting an average of 1,937.1 FTEs.

General Overhead

The Laboratory's General Overhead rate was 49.9% in FY 1994. This is for institutional expenses that are employee-related, such as Human Resources, Safeguards & Security, Plant Operations, and utilities. The General Overhead rate is applied to the wage expense of direct FTEs. The FY 1994 General Overhead costs totaled \$191.2 million, supporting an average of 1,529.8 FTEs. The supplemental labor overhead rate (70% of the General Overhead rate) is applied to the actual cost billed by the vendor. This rate was based on a comparison of overhead services available to supplemental laborers versus Laboratory FTEs. The supplemental labor overhead charge collected \$17.3 million in FY 1994 (included in the \$191.2 million total).

General & Administrative Overhead

A G&A charge of 8.8% on operating costs was levied in FY 1994. This covers institutional expenses for general management and administration that are not employee-related, such as the Director's Office, the Legal Office, Public Affairs, the Controller's Office, and the UC Management Allowance. The FY 1994 G&A costs totaled \$67.3 million, supporting an average of 407.3 FTEs.

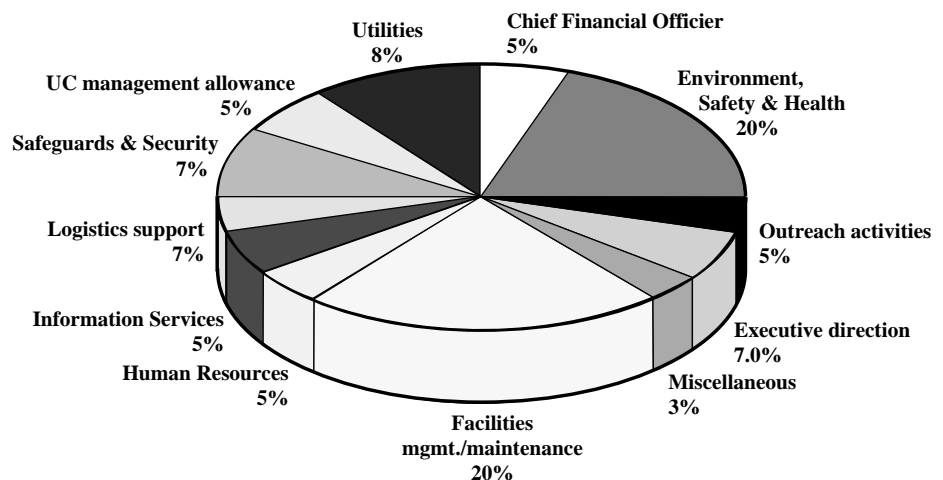
Table 4-2. Overhead close, FY 1994.

| Organization | Allocation (\$K) | Costs (\$K) | FTEs |
|---------------------------------------|---------------------|----------------|----------------|
| General & Admin. (G&A) | | | |
| Senior Management | 16,367 | 15,898 | 90.7 |
| Institutional Stores Excess | 2,833 | 3,188 | 0.0 |
| Executive Officer | 18,594 | 18,255 | 195.6 |
| UC Mgmt. Allowance | 11,826 | 12,537 | 6.2 |
| Technology Transfer | 4,857 | 4,857 | 35.5 |
| Various | 13,226 | 12,537 | 79.3 |
| <i>Subtotal G&A</i> | 67,703 | 67,272 | 407.3 |
| General Overhead | | | |
| Executive Officer | 38,749 | 38,519 | 499.9 |
| AD for Plant Operations | 98,275 | 97,655 | 743.8 |
| Utilities/Telecommunications | 21,216 | 21,138 | 2.0 |
| Various ADs | 19,359 | 19,408 | 123.3 |
| Human Resources | 10,108 | 9,930 | 114.0 |
| Employee Education | 3,690 | 3,531 | 40.0 |
| Various | 566 | 1,070 | 6.8 |
| <i>Subtotal General Overhead</i> | 191,963 | 191,251 | 1,529.8 |
| Total Overhead | 259,666 | 258,523 | 1,937.1 |

Table 4-3. FY 1994 overhead costs by DOE functional categories (includes both G&A and General Overhead).

| Category | Costs (\$K) | % |
|---------------------------------|----------------|---------------|
| Executive Direction | 17,561 | 6.8% |
| Human Resources | 12,640 | 4.9% |
| Chief Financial Officer | 13,673 | 5.3% |
| Legal | 2,410 | 0.9% |
| Logistics Support | 17,319 | 6.7% |
| Administrative Support | 4,631 | 1.8% |
| Quality Assurance | 559 | 0.2% |
| UC Management Allowance | 12,537 | 4.8% |
| Taxes | 147 | 0.0% |
| Information Services | 14,193 | 5.5% |
| Environment, Safety & Health | 49,615 | 19.2% |
| Facilities Mgmt./Maintenance | 52,105 | 20.2% |
| Safeguards & Security | 25,741 | 10.0% |
| Information/Outreach Activities | 13,872 | 5.4% |
| Utilities | 21,350 | 8.3% |
| Procurement | 170 | 0.0% |
| Total | 258,523 | 100.0% |

NOTE: This is a preliminary breakdown subject to change during the FY 1997 Field Budget Submission.

Figure 4-3. FY 1994 overhead costs by DOE functional categories.

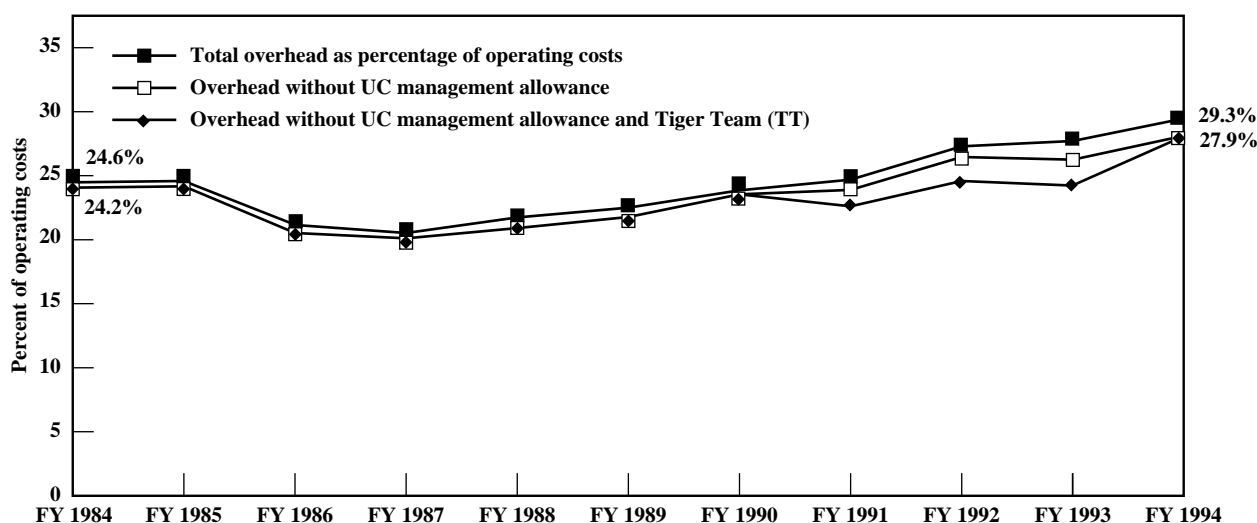


Figure 4-4. LLNL overhead cost history as a percentage of operating costs.

NOTE: Overhead costs for FY 1994 are adjusted by \$7M (or about 0.8% of operating costs) for General Overhead on Support/Organization Burdens and Distributed Services that are charged to overhead cost accounts.

Support/Organization Burdens

The Laboratory (LLNL) uses a personnel matrix system to provide professional and technical support to programs and projects where specific skills are needed. Certain organizations exist, such as Engineering and Computations, whose primary mission is to provide an appropriate quantity and quality of personnel support to other programs and organizations. A burden is a charge, based on the percentage of wage expense for matrixed personnel, that is used to cover the administrative costs of the support organizations. The matrixed personnel directly charge, not only their wage expense, but also the burden charge to the program in which they are working. The support organization manages personnel career, salary, and job assignments. Burden charges are not included in overhead because not all LLNL organizations use matrixed personnel from program support functions.

Organizations that support program functions may institute a burden subject to the review and approval of the Controller's Organization. There were five new burdens approved in FY 1994 covering Physics, Nuclear Chemistry, Hazards Control SPD, Bio-technology, and Nonproliferation NAI. Burden rates are reviewed and recommended annually by the Budget Office and approved by the Finance Department for each organization funded by support burden. Rate adjustments may be made throughout the year as necessary. General Overhead was applied to Support/Organization Burdens for the first time in FY 1994.

The FY 1994 burden budgets were established by an algorithm tied to historical funding levels as a function of the number of FTE's matrixed into the field by each support organization. FY 1994 burden costs closed with a net variance of 1.17% under budget, and collections of 0.33% under budget. The resulting cost to collection variance was closed to General Overhead. Final FY 1994 burden costs were \$84.5 million, supporting an average of 613.8 FTEs.

Table 4-4. Support and Organization Burdens, FY 1994.

| Organization | Budget (\$K) | Costs (2) (\$K) | Collections (\$K) | FTEs |
|---|-------------------------|----------------------------|------------------------------|--------------|
| Mechanical/Electrical Engineering (ME/EE) | 37,140 | 36,720 | 36,680 | 291.2 |
| Materials Fabrication Division (MFD) | 5,500 | 5,438 | 5,564 | 50.0 |
| Plant Engineering (1) | 13,408 | 12,868 | 13,565 | 65.2 |
| Chemistry | 7,100 | 7,135 | 7,086 | 49.0 |
| Computation | 8,500 | 8,499 | 8,236 | 71.4 |
| Earth Sciences | 2,603 | 2,661 | 2,667 | 18.7 |
| Nevada Test Site (NTS) | 1,154 | 1,110 | 1,147 | 13.4 |
| Nuclear Chemistry | 1,592 | 1,509 | 1,601 | 7.9 |
| Hazards Control SPD | 1,220 | 1,157 | 1,192 | 4.6 |
| Security Escorts | 251 | 240 | 297 | 3.0 |
| Nonproliferation NAI | 2,438 | 2,512 | 2,522 | 15.4 |
| Bio-technology | 1,484 | 1,522 | 1,523 | 6.6 |
| Physics | 3,074 | 3,093 | 3,104 | 17.4 |
| Total Burdens | 85,464 | 84,464 | 85,184 | 613.8 |

(1) Includes Construction and Maintenance (C&M) Shops, Maintenance and Operations (M&O) Construction, and Swinerton & Walberg supplemental labor.

(2) Includes General Overhead on wage expense and five new burdens.

Table 4-5. Support and Organization Burden cost trends, FY 1990–1994.

| Organization | FY 1990 Costs (\$K) | FY 1991 Costs (\$K) | FY 1992 Costs (\$K) | FY 1993 Costs (\$K) | FY 1994 (3) Costs (\$K) |
|-----------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|--|
| ME/EE | 27,105 | 27,650 | 28,922 | 30,557 | 36,720 |
| MFD | 6,839 | 6,567 | 6,674 | 6,837 | 5,438 |
| Plant Engineering (1) | 4,832 | 6,768 | 7,146 | 8,306 | 12,868 |
| Chemistry | 5,063 | 5,147 | 5,517 | 5,874 | 7,135 |
| Computations | 6,656 | 6,680 | 6,786 | 7,173 | 8,499 |
| Earth Sciences | 2,147 | 2,055 | 1,947 | 2,082 | 2,661 |
| Nevada Test Site | 2,854 | 2,575 | 2,540 | 2,259 | 1,110 |
| Security Escorts (2) | | 149 | 586 | 333 | 240 |
| Nuclear Chemistry | | | | | 1,509 |
| Hazards Control SPD | | | | | 1,157 |
| Nonproliferation NAI | | | | | 2,512 |
| Bio-technology | | | | | 1,522 |
| Physics | | | | | 3,093 |
| Total Burdens | 55,496 | 57,591 | 60,118 | 63,421 | 84,464 |

(1) Includes Construction and Maintenance (C&M) Shops, Maintenance & Operations (M&O) Construction, and Swinerton & Walberg supplemental labor.

(2) Burden initiated July 1, 1991. FY 1991 data are for the period of July through September 1991.

(3) Includes General Overhead on wage expense and five new burdens.

Distributed Service Centers

Some Laboratory services are provided by Distributed Service Centers that recover the costs of their operations through a cost distribution mechanism that assigns a dollar value to the work performed (e.g., a unit charge based on an hourly rate) or the products produced (e.g., unit charge per item).

The rate structure for a particular service center is reviewed each year by the Budget Office and approved by the Finance Department based on the estimated budget for the organization and anticipated volume of business. Examples of existing recharge operations at LLNL include the Livermore Computer Center (LCC) and the Technical Information Department (TID).

Requests to establish new service centers to meet changing organizational needs and strategies must be submitted to the Controller and follow the approval process as outlined in the LLNL Service Center Policy.

Table 4-6. Distributed Service Center costs and FTEs, FY 1994.

| Center | Costs (\$K) (1) | FTEs |
|---|--------------------|--------------|
| LCC | 19,635 | 103.9 |
| Tritium Facility | 1,687 | 10.4 |
| Mfg. & Materials Engineering Division | 9,095 | 46.0 |
| PE Jobs/Space Non-Capital (2) | 60,101 | 261.1 |
| TID/Communications Resources Office (CRO) | 30,190 | 206.3 |
| Communication Attendants | 1,299 | 12.3 |
| MPC/SIC | 27,170 | 222.9 |
| DCSP | 8,526 | 35.6 |
| Electricity | 15,698 | 0.0 |
| Electricity Distribution Surcharge | 5,396 | 5.3 |
| Space Charge | 8,821 | 25.9 |
| ASSIST | 2,294 | 12.5 |
| Other Service Centers (3) | 11,895 | 47.7 |
| Other Cost Distributions (4) | 1,024 | 6.6 |
| Total | 202,831 | 996.5 |

(1) In FY 1994 General Overhead was applied to wage expense.

(2) PE Jobs/Space Non-Capital is a job cost tracking system and not a recharge.

(3) Includes EE Electronic Services and Manufacturing; Electrical Information Section; Telephone equipment moves, adds, and changes; Open Labnet; Nuclear Chem. Labs; and S&S Materials Management.

(4) Includes cost distributions that do not have a specific expense type: Coil Shop, PE Print Room, and Chemistry Materials Laboratory.

Table 4-7. Distributed Service Center cost trends, FY 1990–1994 (\$K).

| | FY 1990 | FY 1991 | FY 1992 | FY 1993 | FY 1994 (1) |
|---------------------------------------|----------------|----------------|----------------|----------------|----------------|
| LCC | 38,891 | 31,059 | 28,474 | 25,895 | 19,635 |
| Tritium Facility | 2,051 | 1,725 | 3,884 | 2,241 | 1,687 |
| Plutonium Facility (2) | 5,891 | 6,396 | 6,923 | — | — |
| Mfg. & Materials Engineering Division | — | — | — | — | 9,095 |
| Materials Fabrication (3) | 35,958 | 32,055 | 34,176 | 34,996 | — |
| PE Jobs/Space Non-Capital (4) | 57,041 | 63,691 | 60,590 | 48,934 | 60,101 |
| TID/CRO | 22,911 | 22,885 | 26,053 | 26,655 | 30,190 |
| Communication Attendants | 1,053 | 990 | 1,110 | 1,041 | 1,299 |
| Electricity | 11,279 | 14,179 | 14,553 | 16,163 | 15,698 |
| ASSIST | 954 | 1,145 | 1,583 | 1,899 | 2,294 |
| MPC/SIC | — | — | — | 20,706 | 27,170 |
| Space Charge | — | — | — | 3,936 | 8,821 |
| Electricity Distribution Surcharge | — | — | — | 4,077 | 5,396 |
| DCSP | — | — | — | 5,084 | 8,526 |
| Other Service Centers (5) | — | — | 3,986 | 3,455 | 11,895 |
| Other Cost Distributions (6) | — | — | 11,389 | 14,010 | 1,024 |
| Total | 176,029 | 174,125 | 192,721 | 209,092 | 202,831 |

(1) In FY 1994 General Overhead was applied to wage expense.

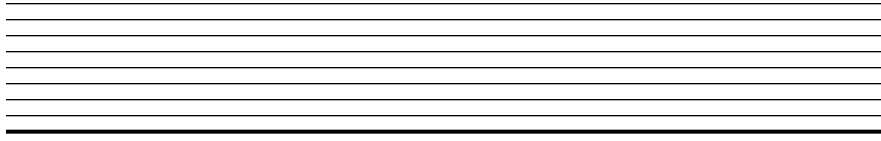
(2) Starting in FY 1993 the Plutonium Facility costs were charged direct.

(3) Starting in FY 1994 Material Fabrication costs were charged direct.

(4) PE Jobs/Space Non-Capital is a job cost tracking system and not a traditional recharge.

(5) Includes EE Electronic Services and Manufacturing; Electrical Information Section; Telephone equipment moves, adds, and changes; Open Labnet; Nuclear Chem. Labs; and S&S Materials Management.

(6) Includes cost distributions that do not have a specific expense type: Coil Shop, PE Print Room, and Chemistry Materials Laboratory.



5

Institutional Management Support

Institutional Management Support

The mission of the Laboratory has broadened and changed over the years. Although it still has a special responsibility for nuclear weapons, the Laboratory also serves as a major national resource for solving many other important science and engineering problems facing the nation.

Cost patterns for FY 1994 reflect these changes in the Laboratory's mission. For example, the Laboratory is now contributing its expertise to improving the nation's economic competitiveness through an intensive effort to transfer technology to the private sector. Although Weapons Research, Development, and Testing (RD&T) is still the largest Laboratory program, its costs decreased by ~23% from FY 1993. However, Technology Commercialization costs increased by ~69% over FY 1993. Total Laboratory costs decreased by ~8% from FY 1993, but there were as many programs with increased costs as there were programs with decreased costs.

Technology Commercialization showed the largest increase in costs (\$19M), Nonproliferation and Intelligence program increased by about \$16M, and Emergency Preparedness/Education previously funded by Weapons RD&T had an increase of \$9M to a total of \$16M. Significant cost decreases occurred in the Advanced Isotope Separation (AIS) program (\$69M) and Weapons RD&T (\$58M). The AIS decrease was partially offset by \$39M received from United States Enrichment Corporation in the non-DOE program.

In FY 1994, total average Laboratory FTE levels decreased to 7,321 from the FY 1993 total average Laboratory FTE level of 8,014. This large decrease was due to a Voluntary Retirement Incentive Program (VRIP 3) that induced 743 employees to retire under its terms early in the fiscal year. There has been only limited hiring during FY 1994 to meet specific needs of various programs that could not be met by internal transfers.

Major LLNL programs showing continued growth in FTE levels during this fiscal year include: Technology Commercialization, Nonproliferation and Intelligence, Emergency Preparedness/Education, Other Defense, and Basic Energy Science. Work for other DOE (WFDOE) as well as non-DOE work both show an increase in FTE levels in FY 1994.

Major LLNL programs showing a decrease in FTE levels in FY 1994 include: Weapons RD&T, Inertial Confinement Fusion (ICF), Environmental Restoration and Waste Management (ERWM), AIS, Magnetic Fusion Energy (MFE), NERSC, Bio/Environmental, and Energy Research.

Distributed support and overhead FTE levels decreased over the previous fiscal year levels. However, beginning in FY 1994, distributed direct support FTEs were charged directly to the program being supported. For example, Materials Fabrication Division's FTEs were directly charged to the programs in FY 1994.

Table 5-1. LLNL operating program mix changes, FY 1954–1994 (%).

| LLNL Program | FY 1954 | FY 1964 | FY 1974 | FY 1984 | FY 1994 |
|---------------------------------|----------------|----------------|----------------|----------------|----------------|
| Weapons RD&T | 84.71 | 74.67 | 64.42 | 39.41 | 22.82 |
| Emergency Preparation/Education | | | | | 1.82 |
| Technology Commercialization | | | | | 5.36 |
| Inertial Confinement Fusion | | 1.00 | 12.96 | 9.10 | 9.04 |
| Nonproliferation & Intelligence | | | | 1.66 | 7.73 |
| Env. Rest. & Waste Mgmt. | | | | | 8.25 |
| Other DOE Defense Programs | | | | 0.32 | 2.60 |
| Special Isotope Separation | | | | 6.64 | |
| Advanced Isotope Separation | | | | 10.94 | 0.49 |
| Magnetic Fusion | 5.21 | 5.64 | 6.30 | 8.92 | 1.69 |
| NERSC | | | | 2.03 | 4.51 |
| Biomedical & Environmental | | 1.62 | 2.41 | 1.75 | 3.29 |
| Basic Energy Science | | | | 0.81 | 0.95 |
| Energy Research | | | 0.28 | 2.75 | 3.43 |
| Reactor | 10.08 | 10.32 | | | |
| Plowshare | | 5.59 | 2.21 | | |
| WFDOE | | | 0.91 | 2.95 | 8.81 |
| Non-DOE | | 1.16 | 10.51 | 12.72 | 19.21 |
| Total | 100.00 | 100.00 | 100.00 | 100.00 | 100.00 |

Table 5-2. Cost and workforce distribution by program, FY 1994.

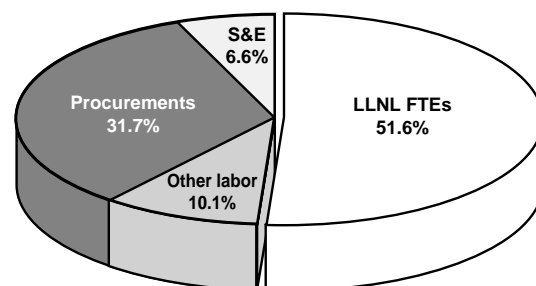
| Program | Actual Costs (\$M) | Average LLNL FTEs |
|---|-----------------------|----------------------|
| Direct Sponsor-Funded Operating | | |
| Weapons RD&T | 195.8 | 867.3 |
| Emergency Preparation/Education | 15.6 | 42.3 |
| Technology Commercialization | 46.0 | 182.4 |
| Inertial Confinement Fusion (1) | 77.6 | 330.7 |
| Nonproliferation and Intelligence | 66.4 | 223.2 |
| Environmental Restoration and Waste Management | 70.7 | 270.2 |
| Other DOE Defense | 22.3 | 70.7 |
| Advanced Isotope Separation | 4.2 | 10.7 |
| Magnetic Fusion | 14.5 | 73.7 |
| NERSC | 38.7 | 95.1 |
| Biomedical and Environmental | 28.3 | 165.6 |
| Basic Energy Science | 8.1 | 31.7 |
| Energy Research | 29.4 | 93.9 |
| WFDOE | 75.6 | 324.2 |
| Non-DOE | 164.8 | 649.3 |
| <i>Subtotal Direct Sponsor-Funded Operating</i> | 858.0 | 3,431.0 |
| Direct Sponsor-Funded Capital | | |
| DOE Equipment | 46.8 | 73.4 |
| DOE General Plant Projects | 8.7 | 0.6 |
| DOE Line-Item Construction | 51.7 | 62.0 |
| <i>Subtotal Direct Sponsor Funded Capital</i> | 107.2 | 136.0 |
| Total Direct Sponsor-Funded | 965.2 | 3,567.0 |
| Distributed Support (2) | — | 1,817.0 |
| General Overhead and G&A (2) | — | 1,937.1 |
| Total | \$965.2 | 7,321.1 |

(1) Includes 37.4 FTEs for general support of the Laser Directorate.

(2) Funded through Direct Sponsor-Funded Programs.

Figure 5-1. Cost distribution by expense category, FY 1994.

| Expense Category | FY 1994 | |
|-------------------------|--------------|--------------|
| | Costs | % |
| LLNL FTEs | 497.4 | 51.6 |
| Other Labor (1) | 97.6 | 10.1 |
| Procurements (2) | 306.4 | 31.7 |
| Supplies & Expenses (3) | 63.8 | 6.6 |
| Total Costs | 965.2 | 100.0 |

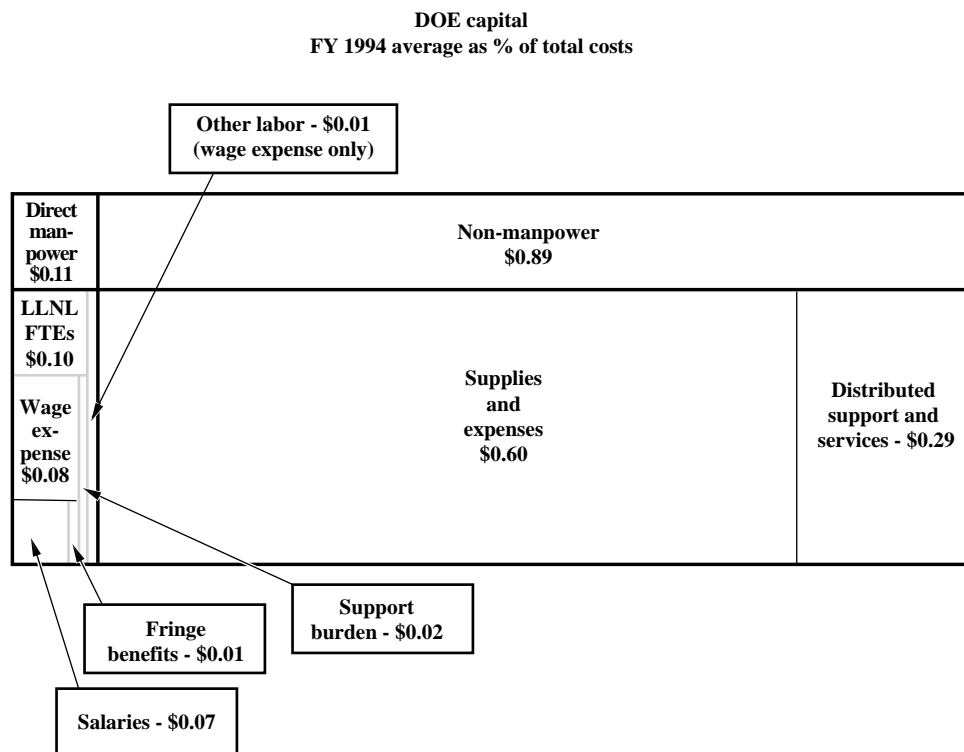
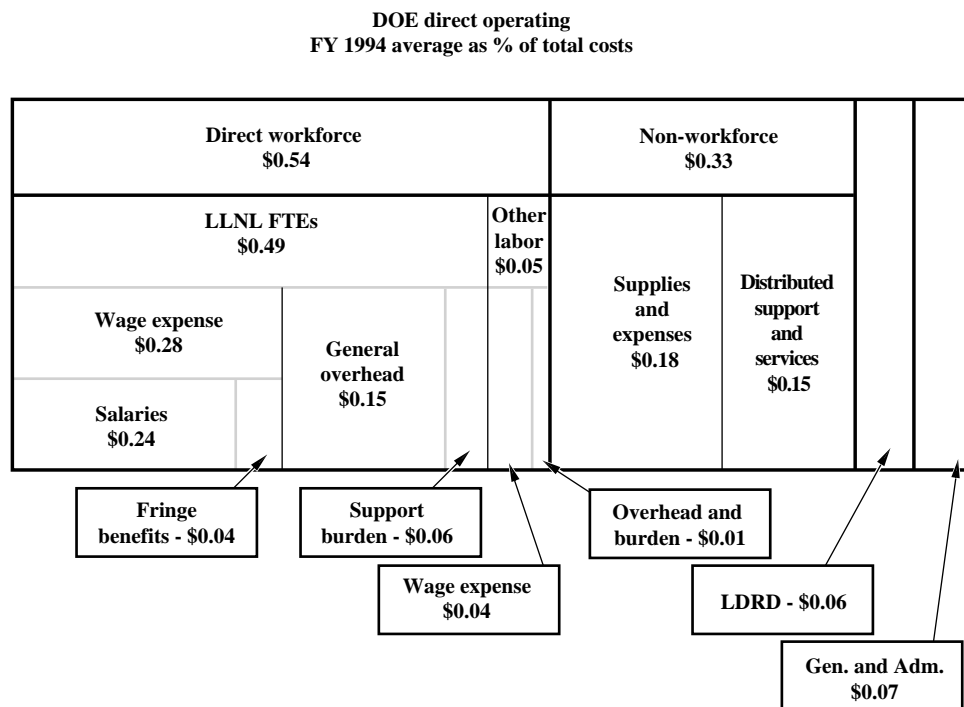


(1) Includes post-doctorates, graduate students, student trainees, summer hires, laboratory retirees, and supplemental labor.

(2) Includes Lease/Lease To Own and DOE Cost Transfers.

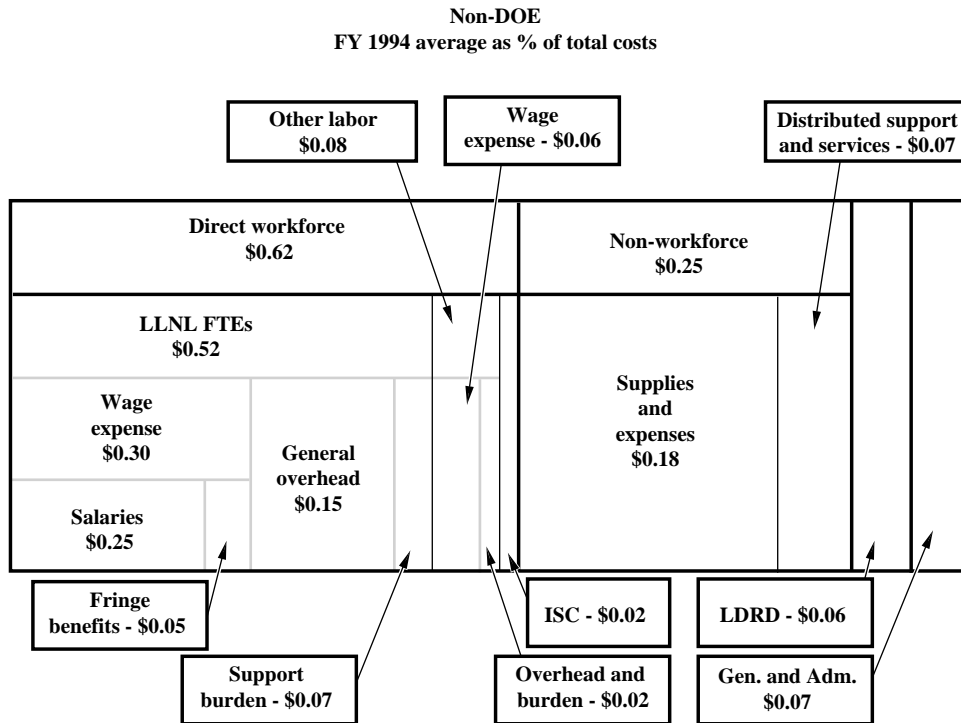
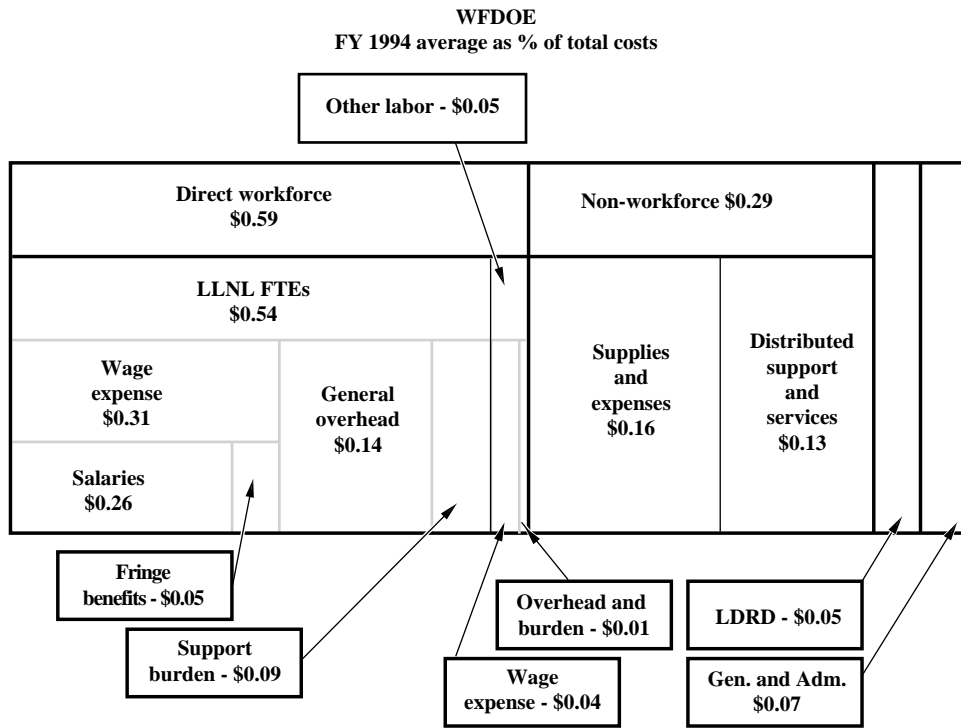
(3) Includes Stores and Travel.

Figure 5-2. Where does your “direct program” dollar go?



Based on FY 1994 cost plans as of September 30, 1994.

Figure 5-2. (Cont.)



Based on FY 1994 cost plans as of September 30, 1994.

Associate Director Program Summaries

This section consists of FY 1994 year-end summaries for each AD program. These summaries are presented in overview form and then in more detail for each AD program. This is the format maintained by Budget Office analysts. Final costs and FTEs are compared with final updates to FY 1994 operating plans. Detailed questions may be addressed either to the appropriate resource manager or to the Budget Office analysts, as indicated.

Table 5-3. Direct sponsor-funded costs by program.

| AD Programs | Direct-Sponsor Funded Costs (\$K) | | | | | | | Total Direct Sponsor Funded |
|-----------------|-----------------------------------|-------|---------|--------------------|---------------|--------------|----------------------|-----------------------------|
| | Operating | | | | DOE Capital | | | |
| | DOE Direct (1) | WFDOE | Non-DOE | Subtotal Operating | Equipment (2) | Construction | Subtotal DOE Capital | |
| Andrews | 70039 | 6578 | 6868 | 83485 | 4453 | 0 | 4453 | 87938 |
| Baldwin | 70305 | 13400 | 12047 | 95752 | 1783 | 21 | 1804 | 97556 |
| Campbell | 95472 | 6263 | 64485 | 166220 | 4245 | 857 | 5102 | 171322 |
| Carrano | 12334 | 7 | 6088 | 18429 | 1456 | 121 | 1577 | 20006 |
| Cochran | 8632 | 1830 | 1464 | 11926 | 2556 | 11507 | 14063 | 25989 |
| Davis | 37911 | 2506 | 6054 | 46471 | 5214 | 1298 | 6512 | 52983 |
| Fisher | 59180 | 2586 | 1015 | 62781 | 4086 | 17080 | 21166 | 83947 |
| Fortner (NT-ES) | 38599 | 12708 | 844 | 52151 | 376 | 10367 | 10743 | 62894 |
| Fortner (P&SS) | 19313 | 3587 | 38548 | 61448 | 904 | 1719 | 2623 | 64071 |
| Holzrichter | 0 | 0 | 0 | 0 | -2106 | 0 | -2106 | -2106 |
| McCurdy | 49287 | 446 | 3594 | 53327 | 16097 | 0 | 16097 | 69424 |
| Miller | 142687 | 24582 | 23281 | 190550 | 5123 | 17387 | 22510 | 213060 |
| Tarter | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wadsworth | 10359 | 633 | 358 | 11350 | 1384 | 0 | 1384 | 12734 |
| Werne | 3491 | 500 | 139 | 4130 | 1235 | 0 | 1235 | 5365 |
| Total | 617609 | 75626 | 164785 | 858020 | 46806 | 60357 | 107163 | 965183 |

(1) Reflects distribution of weapons supporting research costs.

(2) Reflects distribution of capital equipment costs for LDRD activities.

Table 5-4. Distributed budget costs by program.

| AD Programs | Distributed Budget Costs (\$K) | | | | | | | Total Distributed Budget |
|-----------------|--------------------------------|-----------------------------------|-------------------|---------------------------------|----------|---------------------|-------------------|--------------------------------|
| | Distributed Support | | | | Overhead | | | |
| | LDRD | Distributed Service Centers | Support Burden | Total Distributed Support | G&A | General Overhead | Total Overhead | |
| Andrews | 2211 | 0 | 2512 | 4723 | 0 | 0 | 0 | 4723 |
| Baldwin | 2537 | 213 | 0 | 2750 | 0 | 0 | 0 | 2750 |
| Campbell | 5649 | 0 | 0 | 5649 | 85 | 0 | 85 | 5734 |
| Carrano | 2556 | 0 | 1522 | 4078 | 813 | 222 | 1035 | 5113 |
| Cochran | 545 | 27171 | 240 | 27956 | 42152 | 52755 | 94907 | 122863 |
| Davis | 3553 | 0 | 2661 | 6214 | 178 | 72 | 250 | 6464 |
| Fisher | 949 | 126871 | 14025 | 141845 | 0 | 118794 | 118794 | 260639 |
| Fortner (NT-ES) | 3127 | 488 | 2619 | 6234 | 145 | 0 | 145 | 6379 |
| Fortner (P&SS) | 14611 | 0 | 3093 | 17704 | 490 | 539 | 1029 | 18733 |
| Holzrichter | 3812 | 0 | 0 | 3812 | 863 | 0 | 863 | 4675 |
| McCurdy | 2711 | 28534 | 8499 | 39744 | 189 | 1729 | 1918 | 41662 |
| Miller | 3297 | 4103 | 0 | 7400 | 4277 | 0 | 4277 | 11677 |
| Tarter | 0 | 0 | 0 | 0 | 13075 | 0 | 13075 | 13075 |
| Wadsworth | 2777 | 516 | 7135 | 10428 | 148 | 5373 | 5521 | 15949 |
| Werne | 1957 | 14935 | 42158 | 59050 | 4857 | 11767 | 16624 | 75674 |
| Total | 50292 | 202831 | 84464 | 337587 | 67272 | 191251 | 258523 | 596110 |

Table 5-5. FTE breakdown by program.

| AD Program | FTE Breakdown by AD | | | | | | Total AD Program FTEs | AD Organization FTEs |
|-----------------|----------------------------|---------|---------------|-------------------------|----------|---------------|-----------------------------|----------------------------|
| | AD Program FTEs | | | | | | | |
| | Direct-Sponsor Funded FTEs | | | Distributed Budget FTEs | | | | |
| | Operating | Capital | Sub- Total | Distributed Support | Overhead | Sub- Total | | |
| Andrews | 331.4 | 11.5 | 342.9 | 26.4 | 0.0 | 26.4 | 369.3 | 170.2 |
| Baldwin | 382.8 | 5.1 | 387.9 | 15.5 | 0.0 | 15.5 | 403.4 | 82.1 |
| Campbell | 664.0 | 19.4 | 683.4 | 22.7 | 0.3 | 23.0 | 706.4 | 229.0 |
| Carrano | 99.4 | 0.0 | 99.4 | 14.9 | 3.0 | 17.9 | 117.3 | 94.1 |
| Cochran | 34.5 | 2.4 | 36.9 | 226.9 | 957.5 | 1184.4 | 1221.3 | 1059.1 |
| Davis | 177.0 | 27.0 | 204.0 | 32.9 | 1.9 | 34.8 | 238.8 | 190.3 |
| Fisher | 238.3 | 10.8 | 249.1 | 605.8 | 745.9 | 1351.7 | 1600.8 | 1642.8 |
| Fortner (NT-ES) | 251.2 | 7.2 | 258.4 | 39.7 | 0.6 | 40.3 | 298.7 | 154.9 |
| Fortner (P&SS) | 209.3 | 14.5 | 223.8 | 70.0 | 8.0 | 78.0 | 301.8 | 235.0 |
| Holzrichter | 0.0 | 3.4 | 3.4 | 16.5 | 5.4 | 21.9 | 25.3 | 0.0 |
| McCurdy | 164.5 | 0.0 | 164.5 | 225.9 | 19.5 | 245.4 | 409.9 | 648.8 |
| Miller | 817.4 | 34.7 | 852.1 | 40.7 | 51.3 | 92.0 | 944.1 | 219.4 |
| Tarter | 0.0 | 0.0 | 0.0 | 0.0 | 6.2 | 6.2 | 6.2 | 80.5 |
| Wadsworth | 41.4 | 0.0 | 41.4 | 62.1 | 34.3 | 96.4 | 137.8 | 261.8 |
| Werne | 19.8 | 0.0 | 19.8 | 417.0 | 103.2 | 520.2 | 540.0 | 2253.1 |
| Total | 3431.0 | 136.0 | 3567.0 | 1817.0 | 1937.1 | 3754.1 | 7321.1 | 7321.1 |

Table 5-6. LLNL FTEs, retirees, and supplemental labor distribution by AD organization.

| AD Organization | LLNL FTEs (1) | Retirees Work-Years | Supplemental Labor Work-Years (2) |
|----------------------------|--------------------------|--------------------------------|--|
| Andrews | 170.2 | 4.6 | 1.4 |
| Baldwin | 82.1 | 0.9 | 18.5 |
| Campbell | 229.0 | 2.0 | 75.4 |
| Carrano | 94.1 | 0.4 | 7.7 |
| Cochran | 1059.1 | 4.4 | 248.1 |
| Davis | 190.3 | 1.4 | 21.7 |
| Fisher | 1642.8 | 11.5 | 476.7 |
| Fortner (NT-ES) | 154.9 | 3.2 | 6.6 |
| Fortner (P&SS) | 235.0 | 7.1 | 21.0 |
| McCurdy | 648.8 | 4.4 | 41.6 |
| Miller | 219.4 | 3.8 | 1.6 |
| Tarter | 80.5 | 5.6 | 1.3 |
| Wadsworth | 261.8 | 5.5 | 3.5 |
| Werne | 2253.1 | 13.6 | 174.8 |
| Total | 7321.1 | 68.2 | 1099.9 |

(1) Other Labor FTEs not included above are post-doctorates, graduate students, student trainees, and summer hires.

(2) From the Institutional Supplemental Labor Information System (ISLIS).

Table 5-7. FY 1994 cost and FTE summary for AD R. T. Andrews.
Nonproliferation, Arms Control, and International Security Directorate
Resource Manager Lynne Lyberger
Budget Analyst Diana Stewart

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|--------------|--------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 259.1 | 258.0 | 70,059 | 70,039 |
| WFDOE | 28.0 | 24.9 | 7,370 | 6,578 |
| Non-DOE | 51.5 | 48.5 | 5,922 | 6,868 |
| <i>Subtotal Operating</i> | 338.6 | 331.4 | 83,351 | 83,485 |
| DOE Capital (2) | | | | |
| Equipment | 5.4 | 11.5 | 5,500 | 4,453 |
| Construction | 0.0 | 0.0 | 0 | 0 |
| <i>Subtotal DOE Capital</i> | 5.4 | 11.5 | 5,500 | 4,453 |
| Total Direct Sponsor Funded | 344.0 | 342.9 | 88,851 | 87,938 |
| Distributed Support | | | | |
| LDRD | 10.8 | 11.0 | 2,324 | 2,211 |
| Distributed Services Center | 0.0 | 0.0 | 0 | 0 |
| Support Burden | 14.3 | 15.4 | 2,500 | 2,512 |
| Total Distributed Support | 25.1 | 26.4 | 4,824 | 4,723 |
| Overhead | | | | |
| G&A | 0.0 | 0.0 | 0 | 0 |
| General Overhead | 0.0 | 0.0 | 0 | 0 |
| Total Overhead | 0.0 | 0.0 | 0 | 0 |
| Total AD Program FTEs | 369.1 | 369.3 | | |
| Total AD Organization FTEs | 173.8 | 170.2 | | |

(1) The B&R Categories are GB, GC, GJ, NA, and NT.

(2) The B&R Categories are GB, GC, GJ, and NT.

Table 5-8. FY 1994 cost and FTE summary for AD D. E. Baldwin.

Energy Directorate

Resource Manager Megan Crandell

Budget Analyst Diana Stewart

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|--------------|--------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 259.9 | 260.0 | 71,726 | 70,305 |
| WFDOE | 65.1 | 61.7 | 12,921 | 13,400 |
| Non-DOE | 66.5 | 61.1 | 13,403 | 12,047 |
| <i>Subtotal Operating</i> | 391.5 | 382.8 | 98,050 | 95,752 |
| DOE Capital (2) | | | | |
| Equipment | 3.8 | 5.1 | 1,704 | 1,783 |
| Construction | 0.0 | 0.0 | 0 | 21 |
| <i>Subtotal DOE Capital</i> | 3.8 | 5.1 | 1,704 | 1,804 |
| Total Direct Sponsor Funded | 395.3 | 387.9 | 99,754 | 97,556 |
| Distributed Support | | | | |
| LDRD | 13.5 | 13.7 | 2,515 | 2,537 |
| Distributed Service Centers | 1.4 | 1.8 | 150 | 213 |
| Support Burden | 0.0 | 0.0 | 0 | 0 |
| Total Distributed Support | 14.9 | 15.5 | 2,665 | 2,750 |
| Overhead | | | | |
| G&A | 0.0 | 0.0 | 0 | 0 |
| General Overhead | 0.0 | 0.0 | 0 | 0 |
| Total Overhead | 0.0 | 0.0 | 0 | 0 |
| Total AD Program FTEs | 410.2 | 403.4 | | |
| Total AD Organization FTEs | 80.4 | 82.1 | | |

(1) The B&R Categories are AA, AB, AC, AF, AK, AR, AT, CD, DB, ED, EE, EW, GB, GD, GE, GH, HA, HP, HS, KK, NP, NS, and PE.

(2) The B&R Categories are AM, AT, CD, DB, GB, GD, and HA.

Table 5-9. FY 1994 cost and FTE summary for AD E. M. Campbell.**Lasers Directorate****Resource Manager Karen Nakamura****Budget Analyst Bruce Frame**

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|-------------------|---------------|--------------------------|----------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 411.6 | 396.2 | 95,239 | 95,472 |
| WFDOE | 15.9 | 26.8 | 6,113 | 6,263 |
| Non-DOE | 235.4 | 241.0 | 63,434 | 64,485 |
| <i>Subtotal Operating</i> | 662.9 | 664.0 | 164,786 | 166,220 |
| DOE Capital (2) | | | | |
| Equipment | 13.5 | 18.9 | 4,707 | 4,245 |
| Construction | 0.5 | 0.5 | 930 | 857 |
| <i>Subtotal DOE Capital</i> | 14.0 | 19.4 | 5,637 | 5,102 |
| Total Direct Sponsor Funded | 676.9 | 683.4 | 170,423 | 171,322 |
| Distributed Support | | | | |
| LDRD | 23.6 | 22.7 | 5,898 | 5,649 |
| Distributed Service Centers | 0.0 | 0.0 | 0 | 0 |
| Support Burden | 0.0 | 0.0 | 0 | 0 |
| Total Distributed Support | 23.6 | 22.7 | 5,898 | 5,649 |
| Overhead | | | | |
| G&A | 0.0 | 0.3 | 0 | 85 |
| General Overhead | 0.0 | 0.0 | 0 | 0 |
| Total Overhead | 0.0 | 0.3 | 0 | 85 |
| Total AD Program FTEs | 700.5 | 706.4 | | |
| Total AD Organization FTEs | 228.6 | 229.0 | | |

(1) The B&R Categories are AT, CD, GB, GJ, KA, and KC.

(2) The B&R Categories are CD, GB, and KS.

Table 5-10. FY 1994 cost and FTE summary for AD A. V. Carrano.**Biology and Biotechnology Research Directorate****Resource Manager Rita Brown/Sheryl Goodman****Budget Analyst Katherine Korn**

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|--------------|--------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 72.6 | 72.9 | 12,269 | 12,334 |
| WFDOE | 0.0 | 0.0 | 0 | 7 |
| Non-DOE | 26.2 | 26.5 | 5,789 | 6,088 |
| <i>Subtotal Operating</i> | 98.8 | 99.4 | 18,058 | 18,429 |
| DOE Capital (2) | | | | |
| Equipment | 0.0 | 0.0 | 975 | 1,456 |
| Construction | 0.0 | 0.0 | 826 | 121 |
| <i>Subtotal DOE Capital</i> | 0.0 | 0.0 | 1,801 | 1,577 |
| Total Direct Sponsor Funded | 98.8 | 99.4 | 19,859 | 20,006 |
| Distributed Support | | | | |
| LDRD | 9.9 | 8.3 | 2,906 | 2,556 |
| Distributed Service Centers | 0.0 | 0.0 | 0 | 0 |
| Support Burden | 6.9 | 6.6 | 1,551 | 1,522 |
| Total Distributed Support | 16.8 | 14.9 | 4,457 | 4,078 |
| Overhead | | | | |
| G&A | 1.9 | 2.3 | 811 | 813 |
| General Overhead | 0.7 | 0.7 | 245 | 222 |
| Total Overhead | 2.6 | 3.0 | 1,056 | 1,035 |
| Total AD Program FTEs | 118.2 | 117.3 | | |
| Total AD Organization FTEs | 94.9 | 94.1 | | |

(1) The B&R Categories are GB and KP.

(2) The B&R Category is KP.

Table 5-11. FY 1994 cost and FTE summary for R. W. Cochran.**Laboratory Executive Officer****Resource Manager Scott Perkins****Budget Analyst Katherine Korn**

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|----------------|----------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 27.5 | 26.5 | 9,200 | 8,632 |
| WFDOE | 0.7 | 0.9 | 2,929 | 1,830 |
| Non-DOE | 7.8 | 7.1 | 1,702 | 1,464 |
| <i>Subtotal Operating</i> | 36.0 | 34.5 | 13,831 | 11,926 |
| DOE Capital (2) | | | | |
| Equipment | 2.2 | 0.3 | 2,520 | 2,556 |
| Construction | 2.4 | 2.1 | 11,464 | 11,507 |
| <i>Subtotal DOE Capital</i> | 4.6 | 2.4 | 13,984 | 14,063 |
| Total Direct Sponsor Funded | 40.6 | 36.9 | 27,815 | 25,989 |
| Distributed Support | | | | |
| LDRD | 1.4 | 1.0 | 680 | 545 |
| Distributed Service Centers | 223.3 | 222.9 | 27,515 | 27,171 |
| Support Burden | 3.1 | 3.0 | 251 | 240 |
| Total Distributed Support | 227.8 | 226.9 | 28,446 | 27,956 |
| Overhead | | | | |
| G&A | 304.5 | 298.0 | 40,778 | 42,152 |
| General Overhead | 659.7 | 659.5 | 52,872 | 52,755 |
| Total Overhead | 964.2 | 957.5 | 93,650 | 94,907 |
| Total AD Program FTEs | 1,232.6 | 1,221.3 | | |
| Total AD Organization FTEs | 1,069.9 | 1,059.1 | | |

(1) The B&R Categories are GB, KA, KC, KT, and KV.

(2) The B&R Category is GB.

Table 5-12. FY 1994 cost and FTE summary for AD J. C. Davis (Acting).

Environmental Programs Directorate

Resource Manager Edna Waller (Acting)

Budget Analyst Diana Stewart

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|--------------|--------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 163.4 | 152.6 | 39,437 | 37,911 |
| WFDOE | 6.5 | 6.8 | 1,912 | 2,506 |
| Non-DOE | 18.3 | 17.6 | 6,067 | 6,054 |
| <i>Subtotal Operating</i> | 188.2 | 177.0 | 47,416 | 46,471 |
| DOE Capital (2) | | | | |
| Equipment | 23.1 | 27.0 | 5,721 | 5,214 |
| Construction | 0.0 | 0.0 | 1,000 | 1,298 |
| <i>Subtotal DOE Capital</i> | 23.1 | 27.0 | 6,721 | 6,512 |
| Total Direct Sponsor Funded | 211.3 | 204.0 | 54,137 | 52,983 |
| Distributed Support | | | | |
| LDRD | 5.5 | 14.2 | 1,440 | 3,553 |
| Distributed Service Centers | 0.0 | 0.0 | 0 | 0 |
| Support Burden | 20.3 | 18.7 | 2,603 | 2,661 |
| Total Distributed Support | 25.8 | 32.9 | 4,043 | 6,214 |
| Overhead | | | | |
| G&A | 2.0 | 1.4 | 396 | 178 |
| General Overhead | 0.6 | 0.5 | 79 | 72 |
| Total Overhead | 2.6 | 1.9 | 475 | 250 |
| Total AD Program FTEs | 239.7 | 238.8 | | |
| Total AD Organization FTEs | 185.9 | 190.3 | | |

(1) The B&R Categories are AJ, EW, EX, GB, GC, HA, HR, KC, KP, NB, NS, and PE.

(2) The B&R Categories are EW, GB, HA, HR, and KC.

Table 5-13. FY 1994 cost and FTE summary for AD D. K. Fisher.**Plant Operations Directorate****Resource Manager Nancy Moore****Budget Analyst Katherine Korn**

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|----------------|----------------|-------------------|----------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 232.0 | 230.5 | 59,183 | 59,180 |
| WFDOE | 0.7 | 4.2 | 2,242 | 2,586 |
| Non-DOE | 4.2 | 3.6 | 1,291 | 1,015 |
| <i>Subtotal Operating</i> | 236.9 | 238.3 | 62,716 | 62,781 |
| DOE Capital (2) | | | | |
| Equipment | 5.1 | 3.4 | 4,117 | 4,086 |
| Construction | 7.1 | 7.4 | 20,510 | 17,080 |
| <i>Subtotal DOE Capital</i> | 12.2 | 10.8 | 24,627 | 21,166 |
| Total Direct Sponsor Funded | 249.1 | 249.1 | 87,343 | 83,947 |
| Distributed Support | | | | |
| LDRD | 4.4 | 3.0 | 675 | 949 |
| Distributed Service Centers | 544.8 | 533.0 | 64,794 | 126,871 |
| Support Burden | 70.9 | 69.8 | 14,621 | 14,025 |
| Total Distributed Support | 620.1 | 605.8 | 80,090 | 141,845 |
| Overhead | | | | |
| G&A | 0.0 | 0.0 | 0 | 0 |
| General Overhead | 733.9 | 745.9 | 119,491 | 118,794 |
| Total Overhead | 733.9 | 745.9 | 119,491 | 118,794 |
| Total AD Program FTEs | 1,603.1 | 1,600.8 | | |
| Total AD Organization FTEs | 1,645.4 | 1,642.8 | | |

(1) The B&R Categories are AC, EC, EW, GB, HA, and WB.

(2) The B&R Categories are EW, GB, KG, and WB.

Table 5-14. FY 1994 cost and FTE summary for AD R. J. Fortner.

Nuclear Test-Experimental Science Directorate

Resource Manager Linda Schlinger

Budget Analyst Diana Stewart

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|--------------|--------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 182.1 | 185.7 | 38,710 | 38,599 |
| WFDOE | 64.6 | 61.8 | 15,613 | 12,708 |
| Non-DOE | 3.1 | 3.7 | 735 | 844 |
| <i>Subtotal Operating</i> | 249.8 | 251.2 | 55,058 | 52,151 |
| DOE Capital (2) | | | | |
| Equipment | 0.0 | 0.0 | 150 | 376 |
| Construction | 10.6 | 7.2 | 11,750 | 10,367 |
| <i>Subtotal DOE Capital</i> | 10.6 | 7.2 | 11,900 | 10,743 |
| Total Direct Sponsor Funded | 260.4 | 258.4 | 66,958 | 62,894 |
| Distributed Support | | | | |
| LDRD | 16.0 | 15.6 | 3,268 | 3,127 |
| Distributed Service Centers | 4.7 | 2.8 | 915 | 488 |
| Support Burden | 23.1 | 21.3 | 2,870 | 2,619 |
| Total Distributed Support | 43.8 | 39.7 | 7,053 | 6,234 |
| Overhead | | | | |
| G&A | 1.2 | 0.6 | 150 | 145 |
| General Overhead | 0.0 | 0.0 | 0 | 0 |
| Total Overhead | 1.2 | 0.6 | 150 | 145 |
| Total AD Program FTEs | 305.4 | 298.7 | | |
| Total AD Organization FTEs | 161.9 | 154.9 | | |

(1) The B&R Categories are GB, GD, and GJ.

(2) The B&R Categories are GB and GD.

Table 5-15. FY 1994 cost and FTE summary for AD R. J. Fortner.**Physics and Space Sciences Directorate****Resource Manager Vicki Evans (Acting)****Budget Analyst Diana Stewart**

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|--------------|--------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 86.8 | 83.3 | 18,013 | 19,313 |
| WFDOE | 15.1 | 13.7 | 3,900 | 3,587 |
| Non-DOE | 114.3 | 112.3 | 37,262 | 38,548 |
| <i>Subtotal Operating</i> | 216.2 | 209.3 | 59,175 | 61,448 |
| DOE Capital (2) | | | | |
| Equipment | 1.5 | 1.2 | 707 | 904 |
| Construction | 18.7 | 13.3 | 1,853 | 1,719 |
| <i>Subtotal DOE Capital</i> | 20.2 | 14.5 | 2,560 | 2,623 |
| Total Direct Sponsor Funded | 236.4 | 223.8 | 61,735 | 64,071 |
| Distributed Support | | | | |
| LDRD | 61.7 | 52.6 | 16,758 | 14,611 |
| Distributed Service Centers | 0.0 | 0.0 | 0 | 0 |
| Support Burden | 16.9 | 17.4 | 3,090 | 3,093 |
| Total Distributed Support | 78.6 | 70.0 | 19,848 | 17,704 |
| Overhead | | | | |
| G&A | 5.7 | 4.8 | 517 | 490 |
| General Overhead | 3.9 | 3.2 | 576 | 539 |
| Total Overhead | 9.6 | 8.0 | 1,093 | 1,029 |
| Total AD Program FTEs | 324.6 | 301.8 | | |
| Total AD Organization FTEs | 243.6 | 235.0 | | |

(1) The B&R Categories are AT, GB, KA, KB, and KC.

(2) The B&R Categories are GB, KB, and KC.

Table 5-16. FY 1994 cost and FTE summary for J. F. Holzrichter.**Laboratory Directed Research and Development (LDRD)****Resource Manager Fran Crites****Budget Analyst Katherine Korn**

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|-------------------|---------------|--------------------------|----------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct | 0.0 | 0.0 | 0 | 0 |
| WFDOE | 0.0 | 0.0 | 0 | 0 |
| Non-DOE | 0.0 | 0.0 | 0 | 0 |
| <i>Subtotal Operating</i> | 0.0 | 0.0 | 0 | 0 |
| DOE Capital (1) | | | | |
| Equipment | 0.2 | 3.4 | 1,750 | (2,106) |
| Construction | 0.0 | 0.0 | 0 | 0 |
| <i>Subtotal DOE Capital</i> | 0.2 | 3.4 | 1,750 | (2,106) |
| Total Direct Sponsor Funded | 0.2 | 3.4 | 1,750 | (2,106) |
| Distributed Support | | | | |
| LDRD | 14.4 | 16.5 | 3,665 | 3,812 |
| Distributed Service Centers | 0.0 | 0.0 | 0 | 0 |
| Support Burden | 0.0 | 0.0 | 0 | 0 |
| Total Distributed Support | 14.4 | 16.5 | 3,665 | 3,812 |
| Overhead | | | | |
| G&A | 5.5 | 5.4 | 840 | 863 |
| General Overhead | 0.0 | 0.0 | 0 | 0 |
| Total Overhead | 5.5 | 5.4 | 840 | 863 |
| Total AD Program FTEs | 20.1 | 25.3 | | |
| Total AD Organization FTEs | 0.0 | 0.0 | | |

(1) The B&R Category is GB.

Table 5-17. FY 1994 cost and FTE summary for AD C. W. McCurdy (Acting).

Computation Directorate

Resource Manager Steve Stinson (Acting)

Budget Analyst Katherine Korn

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|--------------|--------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 150.2 | 146.3 | 49,395 | 49,287 |
| WFDOE | 0.0 | 0.0 | 495 | 446 |
| Non-DOE | 20.3 | 18.2 | 4,058 | 3,594 |
| <i>Subtotal Operating</i> | 170.5 | 164.5 | 53,948 | 53,327 |
| DOE Capital (2) | | | | |
| Equipment | 0.0 | 0.0 | 21,248 | 16,097 |
| Construction | 0.0 | 0.0 | 0 | 0 |
| <i>Subtotal DOE Capital</i> | 0.0 | 0.0 | 21,248 | 16,097 |
| Total Direct Sponsor Funded | 170.5 | 164.5 | 75,196 | 69,424 |
| Distributed Support | | | | |
| LDRD | 11.4 | 13.6 | 2,782 | 2,711 |
| Distributed Service Centers | 142.2 | 140.9 | 28,082 | 28,534 |
| Support Burden | 70.0 | 71.4 | 9,148 | 8,499 |
| Total Distributed Support | 223.6 | 225.9 | 40,012 | 39,744 |
| Overhead | | | | |
| G&A | 1.2 | 1.0 | 191 | 189 |
| General Overhead | 17.1 | 18.5 | 1,728 | 1,729 |
| Total Overhead | 18.3 | 19.5 | 1,919 | 1,918 |
| Total AD Program FTEs | 412.4 | 409.9 | | |
| Total AD Organization FTEs | 650.0 | 648.8 | | |

(1) The B&R Categories are AF, AT, GB, GD, KC, KT, KV, and WM.

(2) The B&R Categories are AT, GB, GD, KA, and KC.

Table 5-18. FY 1994 cost and FTE summary for AD G. H. Miller.

Defense and Nuclear Technology Directorate

Resource Manager Linda Rakow/Gail Sims

Budget Analyst Diana Stewart

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|--------------|--------------|-------------------|----------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 599.5 | 591.6 | 145,659 | 142,687 |
| WFDOE | 119.2 | 118.4 | 24,101 | 24,582 |
| Non-DOE | 108.7 | 107.4 | 24,691 | 23,281 |
| <i>Subtotal Operating</i> | 827.4 | 817.4 | 194,451 | 190,550 |
| DOE Capital (2) | | | | |
| Equipment | 1.4 | 3.2 | 4,889 | 5,123 |
| Construction | 30.0 | 31.5 | 17,776 | 17,387 |
| <i>Subtotal DOE Capital</i> | 31.4 | 34.7 | 22,665 | 22,510 |
| Total Direct Sponsor Funded | 858.8 | 852.1 | 217,116 | 213,060 |
| Distributed Support | | | | |
| LDRD | 16.5 | 14.4 | 3,464 | 3,297 |
| Distributed Service Centers | 33.7 | 26.3 | 4,385 | 4,103 |
| Support Burden | 0.0 | 0.0 | 0 | 0 |
| Total Distributed Support | 50.2 | 40.7 | 7,849 | 7,400 |
| Overhead | | | | |
| G&A | 44.6 | 51.3 | 4,249 | 4,277 |
| General Overhead | 0.0 | 0.0 | 0 | 0 |
| Total Overhead | 44.6 | 51.3 | 4,249 | 4,277 |
| Total AD Program FTEs | 953.6 | 944.1 | | |
| Total AD Organization FTEs | 222.7 | 219.4 | | |

(1) The B&R Categories are GB and GD.

(2) The B&R Category is GB.

Table 5-19. FY 1994 cost and FTE summary for C. B. Tarter.**Director (Acting)****Resource Manager Bob Vincent****Budget Analyst Katherine Korn**

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|-------------|-------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct | 0.0 | 0.0 | 0 | 0 |
| WFDOE | 0.0 | 0.0 | 0 | 0 |
| Non-DOE | 0.0 | 0.0 | 0 | 0 |
| <i>Subtotal Operating</i> | 0.0 | 0.0 | 0 | 0 |
| DOE Capital | | | | |
| Equipment | 0.0 | 0.0 | 0 | 0 |
| Construction | 0.0 | 0.0 | 0 | 0 |
| <i>Subtotal DOE Capital</i> | 0.0 | 0.0 | 0 | 0 |
| Total Direct Sponsor Funded | 0.0 | 0.0 | 0 | 0 |
| Distributed Support | | | | |
| LDRD | 0.0 | 0.0 | 0 | 0 |
| Distributed Service Centers | 0.0 | 0.0 | 0 | 0 |
| Support Burden | 0.0 | 0.0 | 0 | 0 |
| Total Distributed Support | 0.0 | 0.0 | 0 | 0 |
| Overhead | | | | |
| G&A | 5.9 | 6.2 | 13,819 | 13,075 |
| General Overhead | 0.0 | 0.0 | (625) | |
| Total Overhead | 5.9 | 6.2 | 13,194 | 13,075 |
| Total AD Program FTEs | 5.9 | 6.2 | | |
| Total AD Organization FTEs | 82.2 | 80.5 | | |

Table 5-20. FY 1994 cost and FTE summary for AD J. Wadsworth.

Chemistry and Materials Science Directorate

Resource Manager A. L. Moser

Budget Analyst Katherine Korn

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|--------------|--------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 34.4 | 37.1 | 9,893 | 10,359 |
| WFDOE | 1.6 | 2.7 | 400 | 633 |
| Non-DOE | 2.1 | 1.6 | 600 | 358 |
| <i>Subtotal Operating</i> | 38.1 | 41.4 | 10,893 | 11,350 |
| DOE Capital (2) | | | | |
| Equipment | 0.0 | 0.0 | 1,375 | 1,384 |
| Construction | 0.0 | 0.0 | 0 | 0 |
| <i>Subtotal DOE Capital</i> | 0.0 | 0.0 | 1,375 | 1,384 |
| Total Direct Sponsor Funded | 38.1 | 41.4 | 12,268 | 12,734 |
| Distributed Support | | | | |
| LDRD | 11.0 | 10.4 | 2,747 | 2,777 |
| Distributed Service Centers | 2.0 | 2.7 | 460 | 516 |
| Support Burden | 48.1 | 49.0 | 7,415 | 7,135 |
| Total Distributed Support | 61.1 | 62.1 | 10,622 | 10,428 |
| Overhead | | | | |
| G&A | | 0.5 | 0 | 148 |
| General Overhead | 37.0 | 33.8 | 5,370 | 5,373 |
| Total Overhead | 37.0 | 34.3 | 5,370 | 5,521 |
| Total AD Program FTEs | 136.2 | 137.8 | | |
| Total AD Organization FTEs | 271.5 | 261.8 | | |

(1) The B&R Categories are ED, EE, GB, KC, and KT.

(2) The B&R Categories are GB, ED, and KC.

Table 5-21. FY 1994 cost and FTE summary for AD R. W. Werne.
Engineering and Technology Transfer Directorate
Resource Manager Amy Allec-Helm
Budget Analyst Katherine Korn

| AD Programs | FTE Status | | Cost Status (\$K) | |
|------------------------------------|----------------|----------------|-------------------|---------------|
| | Planned | Actual | Planned | Actual |
| Direct Sponsor Funded | | | | |
| Operating | | | | |
| DOE Direct (1) | 17.2 | 16.8 | 3,568 | 3,491 |
| WFDOE | 2.3 | 2.3 | 473 | 500 |
| Non-DOE | 0.9 | 0.7 | 216 | 139 |
| <i>Subtotal Operating</i> | 20.4 | 19.8 | 4,257 | 4,130 |
| DOE Capital (2) | | | | |
| Equipment | 0.0 | 0.0 | 1,514 | 1,235 |
| Construction | 0.0 | 0.0 | 0 | 0 |
| <i>Subtotal DOE Capital</i> | 0.0 | 0.0 | 1,514 | 1,235 |
| Total Direct Sponsor Funded | 20.4 | 19.8 | 5,771 | 5,365 |
| Distributed Support | | | | |
| LDRD | 9.6 | 9.7 | 1,900 | 1,957 |
| Distributed Service Centers | 69.2 | 66.1 | 14,042 | 14,935 |
| Support Burden | 357.6 | 341.2 | 42,640 | 42,158 |
| Total Distributed Support | 436.4 | 417.0 | 58,582 | 59,050 |
| Overhead | | | | |
| G&A | 32.8 | 35.5 | 4,857 | 4,857 |
| General Overhead | 69.6 | 67.7 | 11,708 | 11,767 |
| Total Overhead | 102.4 | 103.2 | 16,565 | 16,624 |
| Total AD Program FTEs | 559.2 | 540.0 | | |
| Total AD Organization FTEs | 2,251.3 | 2,253.1 | | |

(1) The B&R Categories are EF, GB, and KA.

(2) The B&R Category is GB.

Figure 5-3. LLNL five-year cost trends, FY 1990–1994 (\$M).

| | FY 1990 | FY 1991 | FY 1992 | FY 1993 | FY 1994 |
|----------------------|----------------|----------------|----------------|----------------|--------------|
| DOE Direct Operating | 699.1 | 728.9 | 735.9 | 714.8 | 617.6 |
| Non-DOE/WFDOE | 284.6 | 323.8 | 286.7 | 237.0 | 240.4 |
| Subtotal Operating | 983.7 | 1052.7 | 1022.6 | 951.8 | 858.0 |
| DOE Capital | 86.8 | 82.7 | 70.2 | 97.2 | 107.2 |
| Total LLNL | 1,070.5 | 1,135.4 | 1,092.8 | 1,049.0 | 965.2 |

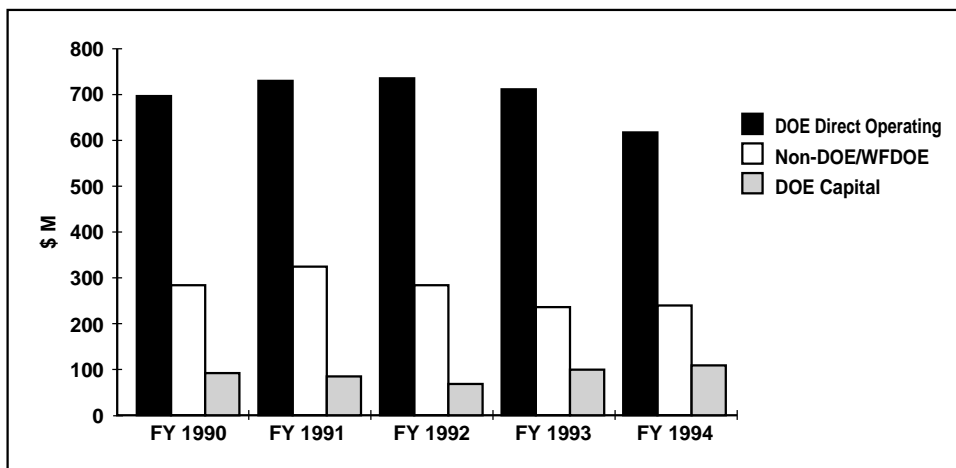


Table 5-22. LLNL five-year cost trends by expense category, FY 1990–1994 (\$M and % of total).

| Institutional Expense Category | FY 1990 | | FY 1991 | | FY 1992 | | FY 1993 | | FY 1994 | |
|-----------------------------------|---------------|--------------|---------------|--------------|---------------|--------------|---------------|--------------|--------------|--------------|
| | Costs | % | Costs | % | Costs | % | Costs | % | Costs | % |
| Career Labor | 507.7 | 47.4 | 512.1 | 45.1 | 522.7 | 47.8 | 545.3 | 52.0 | 497.4 | 51.5 |
| Non-Career Labor | | | | | | | | | | |
| Supplemental Labor | 78.0 | 7.3 | 89.3 | 7.9 | 98.2 | 9.0 | 84.9 | 8.1 | 71.3 | 7.4 |
| Other Labor (1) | 15.7 | 1.5 | 18.4 | 1.6 | 17.9 | 1.6 | 18.4 | 1.7 | 26.3 | 2.7 |
| <i>Subtotal</i> | 93.8 | 8.8 | 107.7 | 9.5 | 116.1 | 10.6 | 103.3 | 9.9 | 97.6 | 10.1 |
| Procurements | | | | | | | | | | |
| Purchases | 350.2 | 32.7 | 376.6 | 33.2 | 328.4 | 30.1 | 292.1 | 27.8 | 278.7 | 28.9 |
| Lease/LTO | 29.3 | 2.7 | 48.6 | 4.3 | 29.7 | 2.7 | 25.0 | 2.4 | 23.3 | 2.4 |
| DOE Cost Transfers | 28.7 | 2.7 | 24.7 | 2.2 | 27.0 | 2.5 | 14.7 | 1.4 | 4.4 | 0.5 |
| <i>Subtotal</i> | 408.2 | 38.1 | 450.0 | 39.6 | 385.1 | 35.3 | 331.8 | 31.6 | 306.4 | 31.7 |
| Supplies and Expense | | | | | | | | | | |
| Stores | 26.3 | 2.5 | 25.1 | 2.2 | 24.7 | 2.3 | 18.8 | 1.8 | 12.7 | 1.3 |
| Travel | 22.6 | 2.1 | 26.8 | 2.4 | 28.5 | 2.6 | 31.4 | 3.0 | 32.9 | 3.4 |
| Other Expenses | 11.9 | 1.1 | 13.6 | 1.2 | 15.7 | 1.4 | 18.4 | 1.8 | 18.2 | 1.9 |
| <i>Subtotal</i> | 60.9 | 5.7 | 65.7 | 5.8 | 68.9 | 6.3 | 68.6 | 6.5 | 63.8 | 6.6 |
| Total | 1070.5 | 100.0 | 1135.4 | 100.0 | 1092.8 | 100.0 | 1049.0 | 100.0 | 965.2 | 100.0 |

(1) Other labor includes post-doctorates, graduate students, student trainees, summer hires, and laboratory retirees.

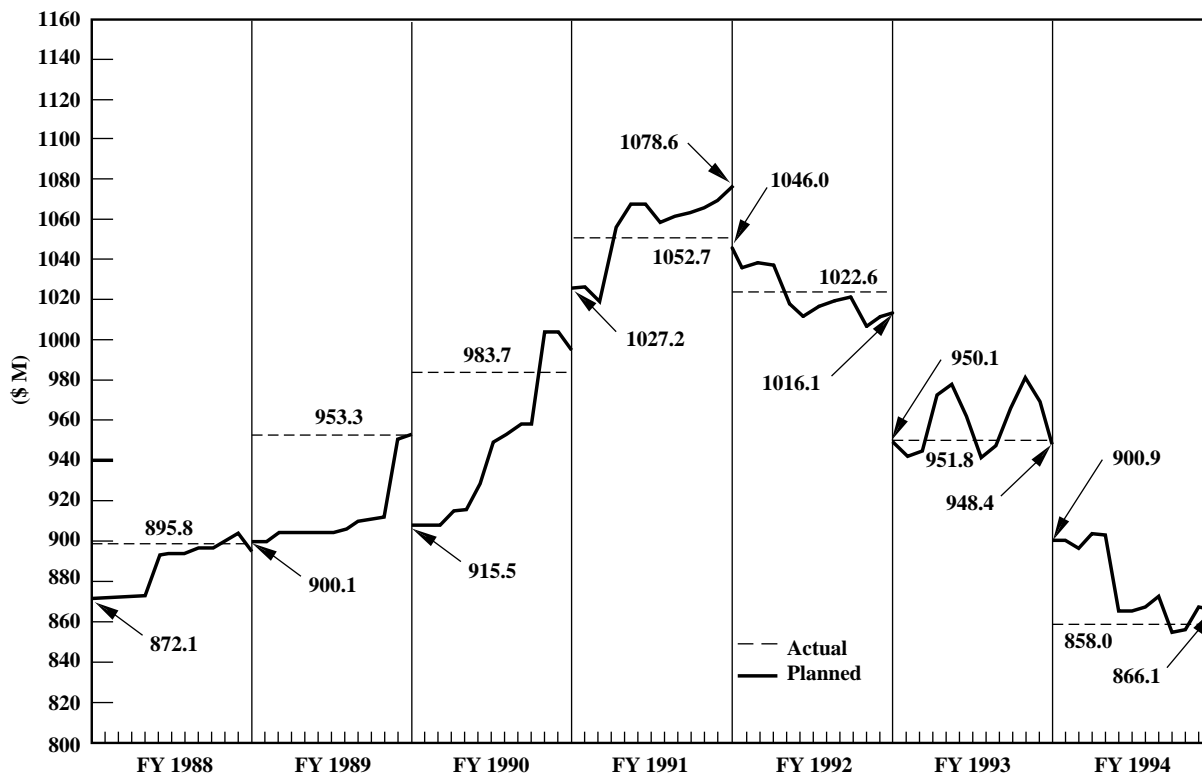


Figure 5-4. LLNL actual operating costs compared with plans, FY 1988–1994.

Table 5-23. LLNL operating cost history by program (\$K).

| FY | Weapons RD&T | Emergency Preparedness/ Education (6) | Tech. Comm. (7) | ICF | Nonprolif. Intell. (8) | ERWM | Defense | SIS | AIS (9) | MFE | NERSC |
|----------|-----------------|---|--------------------|--------|---------------------------|--------|---------|--------|---------|--------|--------|
| 1953 | 5,990 | — | — | — | — | — | — | — | — | 344 | — |
| 1954 | 12,753 | — | — | — | — | — | — | — | — | 785 | — |
| 1955 | 13,900 | — | — | — | — | — | — | — | — | 1,821 | — |
| 1956 | 19,465 | — | — | — | — | — | — | — | — | 2,860 | — |
| 1957 | 26,344 | — | — | — | — | — | — | — | — | 4,572 | — |
| 1958 | 35,440 | — | — | — | — | — | — | — | — | 6,397 | — |
| 1959 | 40,539 | — | — | — | — | — | — | — | — | 6,362 | — |
| 1960 | 42,782 | — | — | — | — | — | — | — | — | 7,018 | — |
| 1961 | 47,369 | — | — | — | — | — | — | — | — | 7,094 | — |
| 1962 | 70,980 | — | — | — | — | — | — | — | — | 7,315 | — |
| 1963 (1) | 70,507 | — | — | 193 | — | — | — | — | — | 7,704 | — |
| 1964 (1) | 82,422 | — | — | 1,105 | — | — | — | — | — | 6,236 | — |
| 1965 (1) | 82,232 | — | — | 1,316 | — | — | — | — | — | 6,593 | — |
| 1966 (1) | 84,752 | — | — | 1,163 | — | — | — | — | — | 6,756 | — |
| 1967 (1) | 83,416 | — | — | 1,364 | — | — | — | — | — | 6,764 | — |
| 1968 (1) | 90,806 | — | — | 1,097 | — | — | — | — | — | 7,262 | — |
| 1969 (1) | 97,891 | — | — | 1,484 | — | — | — | — | — | 7,645 | — |
| 1970 (1) | 102,042 | — | — | 1,930 | — | — | — | — | — | 7,437 | — |
| 1971 (1) | 95,696 | — | — | 6,456 | — | — | — | — | — | 7,146 | — |
| 1972 | 91,812 | — | — | 9,541 | — | — | — | — | — | 7,445 | — |
| 1973 | 93,897 | — | — | 13,530 | — | — | — | — | — | 7,761 | — |
| 1974 | 94,871 | — | — | 19,090 | — | — | — | — | — | 9,271 | — |
| 1975 (2) | 98,177 | — | — | 19,893 | — | — | — | — | 4,739 | 13,873 | 1,327 |
| 1976 (A) | 108,919 | — | — | 22,208 | — | — | — | — | 7,249 | 16,197 | 2,349 |
| 1976 (T) | 33,800 | — | — | 7,002 | — | — | — | — | 2,144 | 5,533 | 798 |
| 1977 | 128,412 | — | — | 30,806 | — | — | 615 | — | 8,087 | 25,357 | 4,018 |
| 1978 | 138,648 | — | — | 40,379 | 4,447 | — | 617 | — | 10,890 | 28,429 | 6,034 |
| 1979 | 134,641 | — | — | 40,564 | 5,602 | — | 640 | — | 14,098 | 34,976 | 8,295 |
| 1980 | 144,725 | — | — | 48,023 | 7,733 | — | 2,453 | 2,998 | 14,793 | 40,107 | 8,985 |
| 1981 | 178,925 | — | — | 57,524 | 8,993 | — | 4,205 | 11,000 | 18,731 | 34,104 | 9,720 |
| 1982 (3) | 215,170 | — | — | 51,975 | 9,225 | — | 4,119 | 19,731 | 24,869 | 38,435 | 11,160 |
| 1983 (4) | 239,667 | — | — | 54,800 | 9,663 | — | 2,121 | 33,231 | 22,403 | 46,343 | 12,477 |
| 1984 (5) | 260,284 | — | — | 60,066 | 10,956 | — | 2,102 | 43,867 | 72,266 | 58,885 | 13,380 |
| 1985 | 281,832 | — | — | 67,159 | 13,823 | — | 2,205 | 43,630 | 74,406 | 55,136 | 19,694 |
| 1986 | 289,827 | — | — | 63,375 | 15,713 | — | 5,836 | 62,187 | 63,315 | 51,021 | 22,833 |
| 1987 | 325,223 | — | — | 66,557 | 15,739 | — | 5,040 | 45,375 | 74,442 | 39,390 | 25,572 |
| 1988 | 314,905 | — | — | 66,141 | 19,089 | 10,057 | 5,376 | 69,606 | 76,932 | 27,301 | 31,235 |
| 1989 | 315,607 | — | — | 64,636 | 24,055 | 12,990 | 4,783 | 68,481 | 94,948 | 29,362 | 31,871 |
| 1990 | 297,700 | — | — | 67,659 | 25,490 | 31,033 | 3,772 | 61,112 | 102,137 | 25,937 | 28,635 |
| 1991 | 267,769 | — | 183 | 77,179 | 29,238 | 46,538 | 3,833 | 65,511 | 119,526 | 22,838 | 41,998 |
| 1992 | 286,957 | — | 2,785 | 84,097 | 30,765 | 68,242 | 7,915 | 4,951 | 128,913 | 22,063 | 35,394 |
| 1993 | 253,520 | — | 27,160 | 90,998 | 50,161 | 78,727 | 16,910 | — | 72,673 | 15,275 | 36,932 |
| 1994 | 195,791 | 15,637 | 45,956 | 77,588 | 66,350 | 70,746 | 22,307 | — | 4,210 | 14,506 | 38,699 |

Notes: Prior to FY 1964, equipment was on a cost basis and included in total operating costs.

Prior to FY 1970, DOE construction figures show costs incurred for projects in year authorized.

For FY 1976, we show actual (A) and transition period (T) costs, as the fiscal year start was changed from July 1 to October 1.

(1) The ICF Program was part of the Weapons Program from FY 1963 through FY 1971, but it is shown separately here.

(2) AIS and ICF were combined into one program financial plan, but are shown separately here.

(3) FY 1982 and prior years do not show the change in inventory.

| Environ. | Basic Energy Science | Energy Research | Reactor | Plow- share | DOE Direct Operating Subtotal | WFDOE | Non- DOE | Total Operating | DOE Equip. (10) | DOE Const. | Total LLNL |
|----------|----------------------------|--------------------|---------|----------------|-------------------------------------|--------|-------------|--------------------|--------------------|---------------|---------------|
| — | — | — | — | — | 6,334 | — | — | 6,334 | | 3,782 | 10,116 |
| — | — | — | 1,517 | — | 15,055 | — | — | 15,055 | | 3,269 | 18,324 |
| — | — | — | 2,430 | — | 18,151 | — | — | 18,151 | | 7,030 | 25,181 |
| — | — | — | 2,788 | — | 25,113 | — | — | 25,113 | | 2,153 | 27,266 |
| — | — | — | 3,505 | — | 34,421 | — | — | 34,421 | | 14,543 | 48,964 |
| — | — | — | 2,867 | — | 44,704 | — | — | 44,704 | | 16,531 | 61,235 |
| — | — | — | 6,939 | 1,339 | 55,179 | — | — | 55,179 | | 6,341 | 61,520 |
| — | — | — | 13,871 | 3,380 | 67,051 | — | — | 67,051 | | 4,147 | 71,198 |
| — | — | — | 18,826 | 3,710 | 76,999 | — | 1,102 | 78,101 | | 2,574 | 80,675 |
| — | — | — | 19,267 | 3,557 | 101,119 | — | 1,915 | 103,034 | | 2,095 | 105,129 |
| 166 | — | — | 21,607 | 4,133 | 104,310 | — | 1,305 | 105,615 | | 8,271 | 113,886 |
| 1,783 | — | — | 11,396 | 6,166 | 109,108 | — | 1,281 | 110,389 | 10,329 | 14,790 | 135,508 |
| 3,039 | — | — | 3,066 | 5,763 | 102,009 | — | 100 | 102,109 | 12,049 | 11,918 | 126,076 |
| 3,331 | — | — | 3,126 | 7,543 | 106,671 | — | 1,890 | 108,561 | 11,095 | 10,071 | 129,727 |
| 3,374 | — | — | 4,941 | 8,680 | 108,539 | — | 3,421 | 111,960 | 9,997 | 5,197 | 127,154 |
| 3,479 | — | — | 4,525 | 9,631 | 116,800 | — | 4,803 | 121,603 | 8,750 | 3,893 | 134,246 |
| 3,364 | — | — | 98 | 7,994 | 118,476 | — | 6,048 | 124,524 | 7,724 | 4,844 | 137,092 |
| 3,389 | — | — | — | 7,757 | 122,555 | 11 | 8,046 | 130,612 | 6,625 | 2,336 | 139,573 |
| 2,999 | — | — | — | 4,671 | 116,968 | 40 | 9,644 | 126,652 | 6,186 | 1,144 | 133,982 |
| 3,089 | — | — | — | 5,174 | 117,061 | 175 | 11,545 | 128,781 | 5,844 | 879 | 135,504 |
| 3,345 | — | — | — | 5,237 | 123,770 | 830 | 12,384 | 136,984 | 5,873 | 1,071 | 143,928 |
| 3,554 | — | 419 | — | 3,249 | 130,454 | 1,333 | 15,483 | 147,270 | 10,472 | 1,618 | 159,360 |
| 5,365 | — | 9,483 | — | — | 152,857 | 775 | 18,466 | 172,098 | 13,520 | 3,628 | 189,246 |
| 7,295 | — | 12,303 | — | — | 176,520 | 1,444 | 20,595 | 198,559 | 28,471 | 4,441 | 231,471 |
| 2,618 | — | 3,951 | — | — | 55,846 | 898 | 6,574 | 63,318 | 3,296 | 2,124 | 68,738 |
| 9,965 | 1,594 | 17,033 | — | — | 225,887 | 2,876 | 30,132 | 258,895 | 18,820 | 19,660 | 297,375 |
| 12,399 | 2,046 | 18,652 | — | — | 262,541 | 3,189 | 41,127 | 306,857 | 24,082 | 16,230 | 347,169 |
| 14,268 | 3,094 | 19,986 | — | — | 276,164 | 13,720 | 40,988 | 330,872 | 26,352 | 38,052 | 395,276 |
| 16,386 | 3,713 | 17,192 | — | — | 307,108 | 20,129 | 42,655 | 369,892 | 30,674 | 61,709 | 462,275 |
| 15,152 | 3,984 | 15,848 | — | — | 358,186 | 17,733 | 51,467 | 427,386 | 34,063 | 67,580 | 529,029 |
| 13,950 | 5,113 | 13,472 | — | — | 407,219 | 21,486 | 55,260 | 483,965 | 38,279 | 95,190 | 617,434 |
| 12,270 | 4,617 | 15,354 | — | — | 452,946 | 21,435 | 59,329 | 533,710 | 30,655 | 108,992 | 673,357 |
| 11,588 | 5,316 | 18,149 | — | — | 556,859 | 19,497 | 83,980 | 660,336 | 46,363 | 101,810 | 808,509 |
| 12,077 | 5,213 | 18,442 | — | — | 593,617 | 29,265 | 117,150 | 740,032 | 65,251 | 83,024 | 888,307 |
| 11,433 | 4,936 | 21,590 | — | — | 612,066 | 22,156 | 187,276 | 821,498 | 46,539 | 64,092 | 932,129 |
| 9,899 | 6,741 | 24,748 | — | — | 638,726 | 28,164 | 203,941 | 870,831 | 44,044 | 62,538 | 977,413 |
| 11,153 | 7,643 | 25,595 | — | — | 665,033 | 28,237 | 202,522 | 895,792 | 43,270 | 60,084 | 999,146 |
| 12,215 | 9,563 | 28,980 | — | — | 697,491 | 41,900 | 213,876 | 953,267 | 49,473 | 52,779 | 1,055,519 |
| 20,700 | 6,333 | 28,613 | — | — | 699,121 | 44,600 | 239,992 | 983,713 | 36,207 | 50,616 | 1,070,536 |
| 21,480 | 6,626 | 26,311 | — | — | 728,847 | 50,800 | 273,040 | 1,052,687 | 49,946 | 32,815 | 1,135,447 |
| 27,938 | 7,570 | 28,331 | — | — | 735,921 | 54,792 | 231,883 | 1,022,596 | 33,023 | 37,198 | 1,092,816 |
| 31,805 | 7,387 | 33,265 | — | — | 714,813 | 60,434 | 176,494 | 951,741 | 46,908 | 50,349 | 1,048,998 |
| 28,249 | 8,134 | 29,436 | — | — | 617,609 | 75,626 | 164,785 | 858,020 | 46,806 | 60,357 | 965,183 |

(4) Nuclear Waste shifted from WFDOE to Energy Research in FY 1983.

(5) The Liquefied Gaseous Fuels (LGF) Program shifted from Biomedical and Environmental to Energy Research in FY 1984.

(6) The Emergency Preparedness/Education Program was part of the Weapons Program prior to FY 1994.

(7) Includes Special Initiatives Program.

(8) The Nonproliferation and Intelligence Program was included under Weapons prior to FY 1978.

(9) Beginning in FY 1994, AIS funding shifted to the United States Enrichment Corporation (a private government corporation).

(10) Figures for DOE equipment are estimated in FY 1969 and 1970.

Table 5-24. Escalation index history, FY 1979–1994.

| Fiscal Year | Urban (1) | | Industrial (1) | | LLNL Wage Expense (2) | | LLNL Composite (3) | |
|----------------|-----------|------|----------------|------|--------------------------|------|-----------------------|------|
| | CPI | % | PPI/WPI | % | WE | % | LLNL | % |
| 1979 | 100.0 | — | 100.0 | — | 100.0 | — | 100.0 | — |
| 1980 | 113.0 | 13.0 | 113.7 | 13.7 | 111.6 | 11.6 | 112.6 | 12.6 |
| 1981 | 125.5 | 11.1 | 125.4 | 10.3 | 123.3 | 10.5 | 124.4 | 10.5 |
| 1982 | 134.4 | 7.1 | 130.0 | 3.7 | 138.0 | 11.9 | 134.4 | 8.0 |
| 1983 | 139.6 | 3.9 | 131.8 | 1.4 | 149.6 | 8.4 | 141.2 | 5.1 |
| 1984 | 145.2 | 4.0 | 134.6 | 2.1 | 159.2 | 6.4 | 147.2 | 4.3 |
| 1985 | 150.6 | 3.7 | 134.9 | 0.2 | 166.5 | 4.6 | 151.1 | 2.6 |
| 1986 | 154.4 | 2.5 | 132.1 | –2.1 | 178.3 | 7.1 | 155.1 | 2.6 |
| 1987 | 158.9 | 2.9 | 132.9 | 0.6 | 182.9 | 2.6 | 157.9 | 1.8 |
| 1988 | 165.4 | 4.1 | 138.3 | 4.1 | 195.3 | 6.8 | 166.1 | 5.2 |
| 1989 | 173.2 | 4.7 | 145.2 | 5.0 | 201.0 | 2.9 | 172.9 | 4.1 |
| 1990 | 181.9 | 5.0 | 149.6 | 3.0 | 213.5 | 6.2 | 181.4 | 4.9 |
| 1991 | 191.2 | 5.1 | 153.3 | 2.5 | 225.2 | 5.5 | 188.8 | 4.1 |
| 1992 | 196.9 | 3.0 | 152.4 | –0.6 | 226.9 | 0.7 | 189.9 | 0.5 |
| 1993 | 202.8 | 3.0 | 154.8 | 1.6 | 238.9 | 5.3 | 196.3 | 3.5 |
| 1994 | 208.3 | 2.7 | 157.0 | 1.4 | 238.5 | –0.2 | 197.9 | 0.8 |

(1) From Data Resources, Inc. (DRI), December 1994. Caveat: The DRI data for CPI and Producer Price Index (PPI) indexes are updated monthly and may change retroactively for up to three years.

(2) Based on the annual change in actual salaries and benefits per man-year of effort. The change in actual salaries may deviate from the DOE salary package as a result of turnover, reserves, and adjustments not chargeable to the DOE salary package.

(3) Based on weighted average for various types of LLNL costs. For FY 1980 through FY 1987, composites are based on a simple formula that weights wage expense as a fraction of total LLNL costs, the PPI as 75% of the other costs, and the CPI as 25% of the other costs.

Beginning in FY 1988, composite rates are based on a more detailed analysis by expense type.

Figure 5-5. LLNL five-year FTE trends, FY 1990–1994.

| | FY 1990 | FY 1991 | FY 1992 | FY 1993 | FY 1994 |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|
| Direct Sponsor-Funded Operating | 3,920 | 3,676 | 3,702 | 3,569 | 3,431 |
| DOE Capital | 166 | 100 | 97 | 150 | 136 |
| Distributed Support and Overhead | 4,042 | 4,122 | 4,182 | 4,295 | 3,754 |
| Total Laboratory | 8,128 | 7,898 | 7,981 | 8,014 | 7,321 |

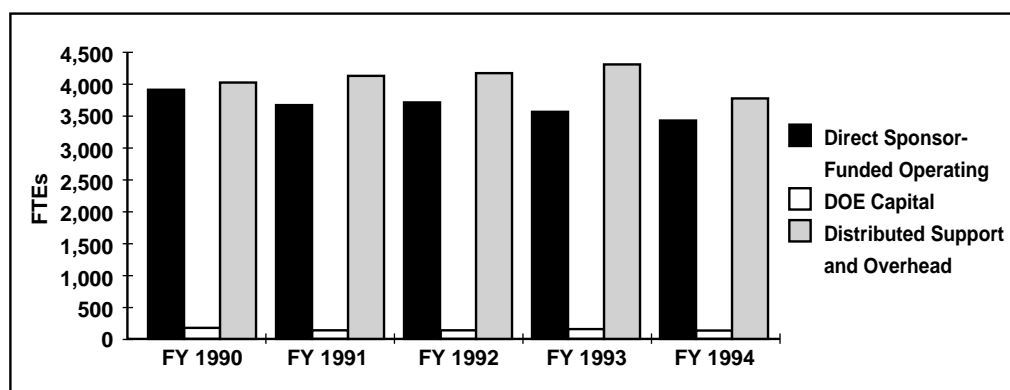


Table 5-25. LLNL FTE history.

| FY | Weapons RD&T | Emergency Preparedness/ Education (6) | Tech. Comm. (7) | ICF (8) | Nonprolif. Intell. (9) | ERWM | Defense | SIS | AIS (10) | MFE | NERSC |
|----------|-----------------|---|--------------------|---------|---------------------------|------|---------|-----|----------|-----|-------|
| 1953 (1) | 655 | — | — | — | — | — | — | — | — | 33 | — |
| 1954 (1) | 1,047 | — | — | — | — | — | — | — | — | 68 | — |
| 1955 (1) | 1,166 | — | — | — | — | — | — | — | — | 150 | — |
| 1956 (1) | 1,606 | — | — | — | — | — | — | — | — | 236 | — |
| 1957 (1) | 2,093 | — | — | — | — | — | — | — | — | 361 | — |
| 1958 (1) | 2,359 | — | — | — | — | — | — | — | — | 459 | — |
| 1959 (1) | 2,631 | — | — | — | — | — | — | — | — | 438 | — |
| 1960 (1) | 2,661 | — | — | — | — | — | — | — | — | 437 | — |
| 1961 (1) | 2,618 | — | — | — | — | — | — | — | — | 386 | — |
| 1962 | 1,680 | — | — | — | — | — | — | — | — | 204 | — |
| 1963 (2) | 1,886 | — | — | 8 | — | — | — | — | — | 239 | — |
| 1964 (2) | 2,185 | — | — | 44 | — | — | — | — | — | 232 | — |
| 1965 (2) | 2,355 | — | — | 48 | — | — | — | — | — | 246 | — |
| 1966 (2) | 2,302 | — | — | 40 | — | — | — | — | — | 234 | — |
| 1967 (2) | 2,270 | — | — | 44 | — | — | — | — | — | 226 | — |
| 1968 (2) | 2,322 | — | — | 36 | — | — | — | — | — | 217 | — |
| 1969 (2) | 2,463 | — | — | 36 | — | — | — | — | — | 221 | — |
| 1970 (2) | 2,431 | — | — | 48 | — | — | — | — | — | 217 | — |
| 1971 (2) | 2,210 | — | — | 138 | — | — | — | — | — | 203 | — |
| 1972 | 1,992 | — | — | 173 | — | — | — | — | — | 201 | — |
| 1973 | 1,977 | — | — | 255 | — | — | — | — | — | 196 | — |
| 1974 | 1,780 | — | — | 280 | — | — | — | — | — | 185 | — |
| 1975 (3) | 1,464 | — | — | 229 | — | — | — | — | 71 | 192 | 34 |
| 1976 (A) | 1,427 | — | — | 242 | — | — | — | — | 92 | 233 | 40 |
| 1976 (T) | 1,427 | — | — | 259 | — | — | — | — | 94 | 266 | 46 |
| 1977 | 1,451 | — | — | 281 | — | — | 6 | — | 55 | 281 | 49 |
| 1978 | 1,417 | — | — | 354 | 60 | — | 10 | — | 116 | 280 | 61 |
| 1979 | 1,279 | — | — | 355 | 66 | — | 12 | — | 131 | 354 | 66 |
| 1980 | 1,225 | — | — | 362 | 72 | — | 13 | 23 | 127 | 340 | 66 |
| 1981 | 1,336 | — | — | 354 | 74 | — | 9 | 56 | 134 | 243 | 69 |
| 1982 | 1,498 | — | — | 315 | 70 | — | 16 | 104 | 154 | 257 | 72 |
| 1983 (4) | 1,581 | — | — | 296 | 62 | — | 10 | 170 | 143 | 283 | 78 |
| 1984 (5) | 1,553 | — | — | 291 | 66 | — | 9 | 178 | 260 | 301 | 84 |
| 1985 | 1,546 | — | — | 301 | 74 | — | 14 | 222 | 252 | 284 | 84 |
| 1986 | 1,571 | — | — | 284 | 83 | — | 17 | 233 | 224 | 214 | 83 |
| 1987 | 1,740 | — | — | 278 | 82 | — | 24 | 180 | 272 | 146 | 89 |
| 1988 | 1,576 | — | — | 311 | 91 | 42 | 29 | 261 | 310 | 118 | 94 |
| 1989 | 1,500 | — | — | 278 | 121 | 46 | 24 | 264 | 340 | 126 | 98 |
| 1990 | 1,412 | — | — | 316 | 120 | 128 | 21 | 222 | 335 | 104 | 101 |
| 1991 | 1,145 | — | 1 | 345 | 115 | 154 | 18 | 198 | 358 | 98 | 93 |
| 1992 | 1,183 | — | 9 | 374 | 122 | 234 | 29 | 18 | 404 | 103 | 102 |
| 1993 | 1,026 | — | 97 | 361 | 178 | 279 | 56 | — | 266 | 79 | 99 |
| 1994 | 867 | 42 | 182 | 331 | 223 | 270 | 71 | — | 11 | 74 | 95 |

Note: For FY 1976, we show actual (A) and transition period (T) FTEs, as the fiscal year start was changed from July 1 to October 1.

(1) FTEs for distributed support and overhead are loaded into direct sponsor-funded programs for FY 1953 through FY 1961.

(2) ICF was a part of the Weapons Program from FY 1963 through FY 1971, but is shown separately here.

(3) AIS and ICF were in one program financial plan in FY 1975, but are shown separately here.

(4) Nuclear Waste shifted from WFDOE to Energy Research in FY 1983.

(5) The LGF Program shifted from Biomedical and Environmental to Energy Research in FY 1984.

(6) The Emergency Preparedness/Education Program was part of the Weapons Program prior to FY 1994.

(7) Includes Special Initiatives Program.

| Bio- Environ. | Basic Energy Science | Energy Research | Reactor | Plow- share | WFD OE | Non- DOE | Total Direct Sponsor- Funded Operating | DOE Capital (11) | Total Direct Sponsor Funded | Distributed Support and Overhead (12) | Total Lab FTEs (13) | Total Year-End Heads (13, 14, 15) |
|------------------|----------------------------|--------------------|---------|----------------|--------|-------------|---|------------------------|--------------------------------------|--|------------------------------|--|
| — | — | — | — | — | — | — | 688 | — | 688 | — | 688 | 1,032 |
| — | — | — | 123 | — | — | — | 1,238 | — | 1,238 | — | 1,238 | 1,465 |
| — | — | — | 179 | — | — | — | 1,495 | — | 1,495 | — | 1,495 | 1,912 |
| — | — | — | 230 | — | — | — | 2,072 | — | 2,072 | — | 2,072 | 2,567 |
| — | — | — | 264 | — | — | — | 2,718 | — | 2,718 | — | 2,718 | 3,098 |
| — | — | — | 245 | — | — | — | 3,063 | — | 3,063 | — | 3,063 | 3,600 |
| — | — | — | 475 | 110 | — | — | 3,654 | — | 3,654 | — | 3,654 | 4,186 |
| — | — | — | 852 | 208 | — | — | 4,158 | — | 4,158 | — | 4,158 | 4,528 |
| — | — | — | 1,030 | 193 | — | 64 | 4,291 | — | 4,291 | — | 4,291 | 4,677 |
| — | — | — | 564 | 104 | — | 75 | 2,627 | 40 | 2,667 | 1,769 | 4,436 | 4,695 |
| 4 | — | — | 547 | 119 | — | 34 | 2,837 | 42 | 2,879 | 1,928 | 4,807 | 4,994 |
| 72 | — | — | 358 | 169 | — | 68 | 3,128 | 70 | 3,198 | 2,109 | 5,307 | 5,458 |
| 125 | — | — | 127 | 192 | — | 18 | 3,111 | 82 | 3,193 | 2,133 | 5,326 | 5,390 |
| 141 | — | — | 125 | 221 | — | 71 | 3,134 | 72 | 3,206 | 2,204 | 5,410 | 5,631 |
| 143 | — | — | 184 | 235 | — | 98 | 3,200 | 81 | 3,281 | 2,280 | 5,561 | 5,515 |
| 139 | — | — | 153 | 226 | — | 131 | 3,224 | 85 | 3,309 | 2,324 | 5,633 | 5,801 |
| 136 | — | — | 3 | 199 | — | 172 | 3,230 | 98 | 3,328 | 2,391 | 5,719 | 5,928 |
| 127 | — | — | — | 188 | — | 198 | 3,209 | 91 | 3,300 | 2,445 | 5,745 | 5,543 |
| 107 | — | 1 | — | 121 | — | 204 | 2,984 | 66 | 3,050 | 2,309 | 5,359 | 5,270 |
| 102 | — | 6 | — | 115 | — | 249 | 2,838 | 47 | 2,885 | 2,297 | 5,182 | 5,617 |
| 98 | — | 20 | — | 131 | — | 284 | 2,961 | 42 | 3,003 | 2,417 | 5,420 | 5,270 |
| 95 | — | 54 | — | 77 | — | 325 | 2,796 | 53 | 2,849 | 2,364 | 5,213 | 5,454 |
| 122 | — | 207 | — | — | — | 322 | 2,641 | 60 | 2,701 | 2,854 | 5,555 | 5,732 |
| 138 | — | 223 | — | — | — | 331 | 2,726 | 92 | 2,818 | 2,908 | 5,726 | 6,070 |
| 163 | — | 262 | — | — | — | 367 | 2,884 | 119 | 3,003 | 3,005 | 6,008 | 6,257 |
| 158 | 23 | 233 | — | — | — | 387 | 2,924 | 187 | 3,111 | 3,184 | 6,295 | 6,730 |
| 179 | 30 | 204 | — | — | — | 443 | 3,154 | 236 | 3,390 | 3,331 | 6,721 | 7,035 |
| 175 | 39 | 184 | — | — | — | 538 | 3,199 | 268 | 3,467 | 3,399 | 6,866 | 7,087 |
| 174 | 41 | 145 | — | — | 154 | 400 | 3,142 | 354 | 3,496 | 3,521 | 7,017 | 7,313 |
| 168 | 41 | 159 | — | — | 146 | 393 | 3,182 | 444 | 3,626 | 3,610 | 7,236 | 7,717 |
| 135 | 46 | 108 | — | — | 130 | 367 | 3,272 | 447 | 3,719 | 3,651 | 7,370 | 7,608 |
| 112 | 44 | 92 | — | — | 104 | 416 | 3,391 | 362 | 3,753 | 3,697 | 7,450 | 7,900 |
| 88 | 42 | 120 | — | — | 100 | 495 | 3,587 | 353 | 3,940 | 3,836 | 7,776 | 8,215 |
| 87 | 43 | 109 | — | — | 115 | 627 | 3,758 | 357 | 4,115 | 3,948 | 8,063 | 8,386 |
| 95 | 37 | 115 | — | — | 97 | 819 | 3,872 | 224 | 4,096 | 3,924 | 8,020 | 8,603 |
| 102 | 42 | 126 | — | — | 87 | 869 | 4,037 | 265 | 4,302 | 3,978 | 8,280 | 8,942 |
| 106 | 41 | 132 | — | — | 97 | 839 | 4,047 | 197 | 4,244 | 3,975 | 8,219 | 8,688 |
| 97 | 42 | 123 | — | — | 155 | 830 | 4,044 | 178 | 4,222 | 4,025 | 8,247 | 8,868 |
| 142 | 30 | 117 | — | — | 132 | 740 | 3,920 | 166 | 4,086 | 4,042 | 8,128 | 8,548 |
| 144 | 30 | 119 | — | — | 174 | 684 | 3,676 | 100 | 3,776 | 4,122 | 7,898 | 8,471 |
| 159 | 31 | 118 | — | — | 147 | 669 | 3,702 | 97 | 3,799 | 4,182 | 7,981 | 8,812 |
| 168 | 28 | 106 | — | — | 247 | 579 | 3,569 | 150 | 3,719 | 4,295 | 8,014 | 8,387 |
| 166 | 32 | 94 | — | — | 324 | 649 | 3,431 | 136 | 3,567 | 3,754 | 7,321 | 7,716 |

(8) ICF includes general support of the Laser Directorate starting in FY 1991.

(9) The Nonproliferation and Intelligence Program was included under Weapons prior to FY 1978.

(10) Beginning in FY 1994, AIS funding shifted to the United States Enrichment Corporation (a private government corporation).

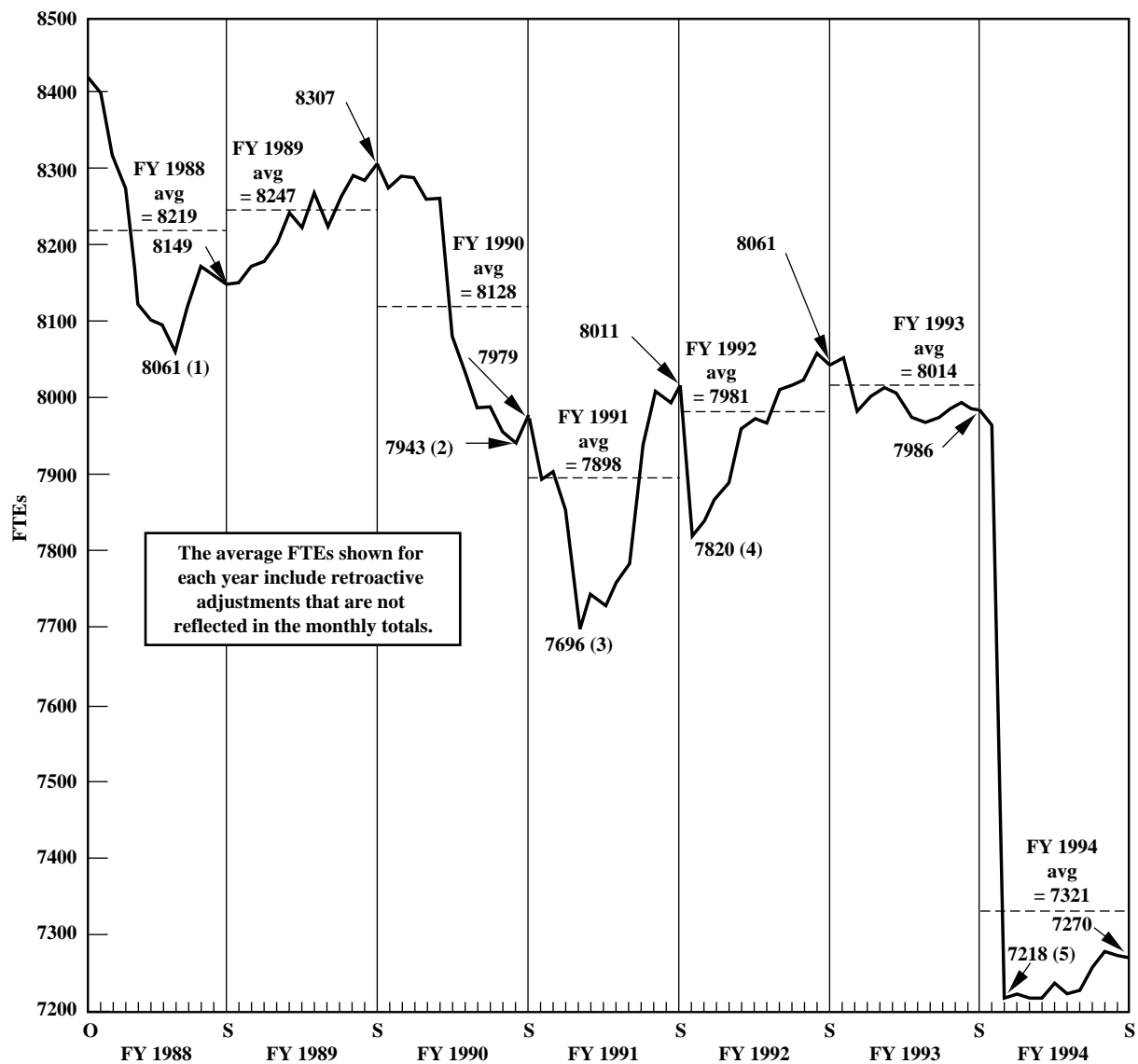
(11) This includes line-item construction, General Plant Projects (GPP), and equipment.

(12) This includes facilities recharged, services recharged, support burdens LDRD (starting in FY 1985), General Overhead, Laboratory General Expense (LGE) (in FY 1991 and FY 1992) and G&A (starting in FY 1993).

(13) Total heads for FY 1953 through FY 1961 are estimates based on FTE data.

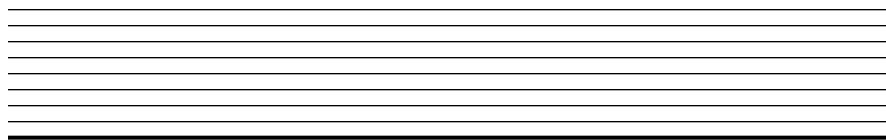
(14) This does not include summer employees, post-doctorates, Laboratory Associates, Student Trainee Programs, or Common-Law Employees.

(15) Beginning in FY 1993, this no longer includes indeterminate-time retirees.



- (1) Reflects the Voluntary Separation Program (VSP) with 369 terminations/retirements.
- (2) Reflects the Early Retirement Incentive Program (ERIP) with 329 retirements.
- (3) Reflects the UCRP Plus 5 Incentive Program with 243 retirements.
- (4) Reflects the PERS Plus 5 Incentive Program with 207 retirements.
- (5) Reflects the VRIP Plus 3 Incentive Program with 743 retirements.

Figure 5-6. LLNL workforce by month, FY 1988–1994.



6

Data for Other DOE Laboratories

Data for Other DOE Laboratories

Occasionally it is helpful to compare cost/FTE data among National Laboratories. However, because the cost-accounting systems and definitions can vary greatly in each Laboratory, cost-framing methods can also differ. For example, LLNL and Los Alamos National Laboratory use a total wage distribution base to calculate overhead, while the remainder of the Laboratories use a modified total direct distribution base. Also, some organizations directly recharge activities that others include in overhead. Some of the major idiosyncrasies of each different accounting systems are noted in this chapter. Therefore, only general inferences should be drawn from these data. Specific comparisons would be invalid.

Table 6-1. Other DOE Laboratories for which financial information is available.

| Acronym | Laboratory |
|---------|---------------------------------------|
| Ames | Ames Laboratory |
| ANL | Argonne National Laboratory |
| BNL | Brookhaven National Laboratory |
| FNAL | Fermi National Accelerator Laboratory |
| LANL | Los Alamos National Laboratory |
| LBL | Lawrence Berkeley Laboratory |
| ORNL | Oak Ridge National Laboratory |
| PNL | Pacific Northwest Laboratory |
| PPPL | Princeton Plasma Physics Laboratory |
| SNL | Sandia National Laboratories |
| SLAC | Stanford Linear Accelerator Center |

Table 6-2. Summary cost data for DOE Laboratories, FY 1990–1994 (\$M).

| | Total Costs, FY | | | | | Operating Costs, FY | | | | | FTEs, FY | | | | |
|---------|-----------------|---------|---------|---------|---------|---------------------|---------|---------|---------|---------|----------|-------|-------|-------|-------|
| | 1990 | 1991 | 1992 | 1993 | 1994 | 1990 | 1991 | 1992 | 1993 | 1994 | 1990 | 1991 | 1992 | 1993 | 1994 |
| Ames | 25.4 | 28.4 | 34.4 | 40.2 | 38.0 | 21.9 | 25.3 | 31.2 | 36.3 | 33.1 | 389 | 413 | 473 | 489 | 489 |
| ANL | 371.5 | 441.6 | 521.2 | 579.6 | 621.2 | 318.4 | 367.0 | 391.5 | 421.5 | 468.6 | 4,015 | 4,355 | 4,610 | 4,858 | 5,027 |
| BNL | 303.0 | 331.3 | 384.5 | 400.4 | 414.2 | 250.0 | 271.2 | 281.5 | 283.5 | 285.0 | 3,270 | 3,344 | 3,443 | 3,484 | 3,417 |
| FNAL | 207.3 | 216.9 | 227.6 | 171.9 | 239.7 | 161.5 | 160.9 | 167.9 | 166.9 | 172.0 | 2,315 | 2,411 | 2,327 | 2,298 | 2,194 |
| LANL | 1,039.0 | 1,038.0 | 1,102.0 | 1,167.0 | 1,145.0 | 950.0 | 964.0 | 1,028.0 | 1,100.0 | 1,075.0 | 7,820 | 7,565 | 7,450 | 7,640 | 7,020 |
| LBL | 226.9 | 231.7 | 266.6 | 271.5 | 276.8 | 175.1 | 189.4 | 217.7 | 212.4 | 217.6 | 2,559 | 2,559 | 2,616 | 2,798 | 2,631 |
| LLNL | 1,070.5 | 1,135.4 | 1,092.8 | 1,049.0 | 965.2 | 983.7 | 1,052.7 | 1,022.6 | 951.8 | 858.0 | 8,128 | 7,898 | 7,981 | 8,014 | 7,321 |
| ORNL | 477.2 | 477.4 | 535.1 | 590.4 | 568.5 | 437.7 | 443.1 | 498.1 | 552.5 | 524.3 | 4,520 | 4,502 | 4,704 | 4,966 | 4,714 |
| PNL | 303.0 | 366.0 | 427.0 | 465.4 | 531.9 | 293.0 | 352.0 | 406.0 | 421.5 | 466.8 | 2,878 | 3,274 | 3,345 | 3,632 | 3,895 |
| PPPL | 96.0 | 91.7 | 112.6 | 122.0 | 108.1 | 91.7 | 89.6 | 109.2 | 114.8 | 104.1 | 895 | 946 | 1,035 | 1,105 | 976 |
| SNL (1) | — | — | — | — | 1,419.0 | — | — | — | — | 1,304.3 | — | — | — | — | 8,494 |
| SLAC | 148.1 | 143.6 | 148.7 | 168.2 | 187.2 | 118.2 | 116.2 | 121.0 | 140.8 | 129.0 | 1,662 | 1,510 | 1,473 | 1,631 | 1,615 |

(1) Sandia National Laboratories data not provided for fiscal years 1990 through 1993.

Table 6-3. FY 1994 overhead information for DOE Laboratories.

| Laboratory | Net Overhead Costs (\$M) | Distribution Base (\$M) | Overhead Rate applied to Distribution Base (%) | Operating Costs (\$M) | Overhead Costs as % of Operating Costs |
|------------|--------------------------|-------------------------|--|-----------------------|--|
| Ames | 8.2 | 23.5 | 43.5 (1) | 33.1 | 24.8 |
| ANL | 87.2 | 343.1 | 25.5 (2) | 468.6 | 18.6 |
| BNL | 85.7 | 195.9 | 49.5 (2) | 285.0 | 30.0 |
| FNAL | 42.2 | 117.5 | 35.9 | 172.0 | 24.5 |
| LANL | 250.4 | 420.2 | 59.6 (2) | 1,075.0 | 23.3 |
| LBL | 66.1 | 126.9 | 52.1 (2) | 217.6 | 30.4 |
| LLNL | 67.3/184.2 (3) | 764.5/383.3 (4) | 8.8/48.1 | 858.0 | 29.3 |
| ORNL | 133.8 | 286.0 | 41.8 (5) | 524.3 | 25.5 |
| PNL | 116.2 | (6) | (6) | 466.8 | 24.9 |
| PPPL | 33.8 (7) | 55.3 | 61.1 | 93.2 (8) | 36.2 |
| SNL | 290.0/44.4 (9) | 458.6/1250.0 (10) | 66.6/3.6 | 1,304.3 | 25.6 |
| SLAC | 32.3 | 84.9 | 38.0 | 129.0 | 25.0 |

(1) The Ames overhead rate is a composite value with several elements. Research subcontracts and off-site work are treated more favorably than 45%.

(2) ANL, BNL, LBL, and LANL exempt certain elements from bearing overhead and apply reduced rates on others. This results in a more complex calculation than simply multiplying their overhead rates and their distribution bases. Also, ANL directly allocates space, health physics, and quality assurance costs, which, if added to overhead, would generate an overhead rate of about 34.9%, and a normalized rate as a percentage of operating budget of 25.9%.

(3) LLNL overhead costs are divided into two separate categories—G&A and General Overhead. General overhead has been corrected for \$7M of double-counted overhead on support/organization burdens and distributed services to calculate true total overhead as % of total Lab.

(4) G&A distribution base—operating costs excluding G&A and approved exemptions. General Overhead distribution base—operating wage expense.

(5) ORNL preprices certain overhead accounts using preapproved special rates before net overhead (gross prepriced) is distributed to the modified cost base. Examples of these special areas are off-site assignments and isotope production.

(6) The PNL distribution base and overhead rate are not available as a single value because of multiple allocation bases. Also these numbers do not include private business costs.

(7) PPPL excludes overhead costs associated with construction and off-site activities (\$0.9M).

(8) PPPL excludes TPX preliminary design costs. Although TPX was not approved as a line item project by Congress, operating funding was appropriated to proceed with preliminary design and R&D activities. Per DOE direction, the preliminary design costs were treated as if construction funded in the application of overhead to be consistent with the budget as submitted to Congress.

(9) SNL has two separate overhead pools for indirect costs and for corporate taxes/management fee.

(10) SNL recovers indirect costs primary on Sandia's direct labor base. In addition, on-site contractors are applied a reduced indirect rate and are not included in the distribution base reported. The corporate taxes/management fee pool is recovered over total costs.

Table 6-4. Overhead costs as a percentage of operating costs for DOE Laboratories, FY 1990–1994 (\$M).

| Laboratory | FY 1990 | FY 1991 | FY 1992 | FY 1993 | FY 1994 |
|------------|-----------------|---------|---------|----------|----------|
| Ames | 29.7 | 28.1 | 26.0 | 24.2 | 24.8 |
| ANL | 18.6 | 18.4 | 19.9 | 18.9 | 18.6 |
| BNL | 29.6 | 29.4 | 30.5 | 30.1 | 30.0 |
| FNAL | 22.9 | 22.8 | 25.6 | 25.0 | 24.5 |
| LANL | 25.2 | 26.2 | 26.4 | 22.6 | 23.3 |
| LBL | 30.2 | 31.6 | 30.9 | 31.2 | 30.4 |
| LLNL | 24.0 | 24.9 | 27.3 | 27.8 | 29.3 (1) |
| ORNL | 21.3 | 24.3 | 24.4 | 26.0 | 25.5 |
| PNL | 35.5 (29.2) (2) | 25.4 | 25.9 | 24.1 | 24.9 |
| PPPL | 24.9 | 27.0 | 24.4 | 30.7 (3) | 36.2 |
| SNL | (4) | (4) | (4) | (4) | 25.6 |
| SLAC | 25.7 | 26.8 | 25.8 | 23.9 | 25.0 |

(1) LLNL overhead costs are divided into two separate categories—G&A and General Overhead. General overhead has been corrected for \$7M of double-counted overhead on support/organization burdens and distributed services to calculate true total overhead as % of total Lab.

(2) PNL's overhead included the cost of management and administration for technical organizations through FY 1990. Most other laboratories exclude this cost from their calculation, which would yield the adjusted rate for PNL as shown in brackets.

(3) PPPL increase from FY 1992 to FY 1993 primarily due to the reclassification of several activities into the overhead pool (ES&H, QA, and Schedule Control).

(4) SNL data not provided for fiscal years 1990 through 1993.

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